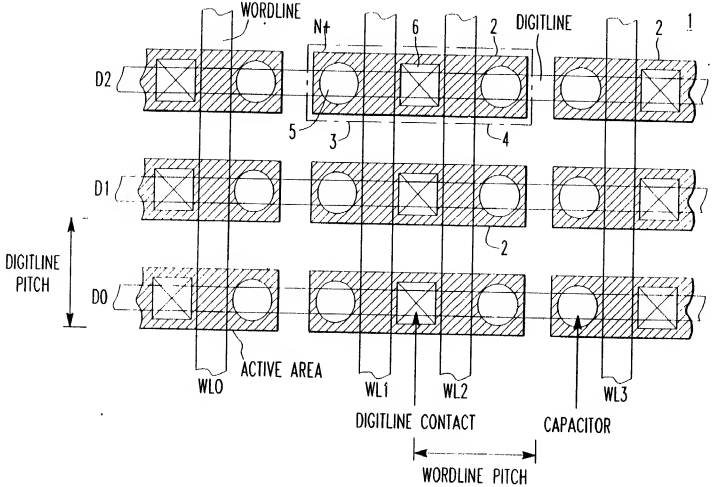

WORDLINE
N+
6
2
DIGITLINE
2
1
D2
5
3
4
D1
2
DIGITLINE
PITCH
D0
WL0
ACTIVE AREA
WL1
WL2
WL3
DIGITLINE CONTACT
CAPACITOR
WORDLINE PITCH

FIG. 1

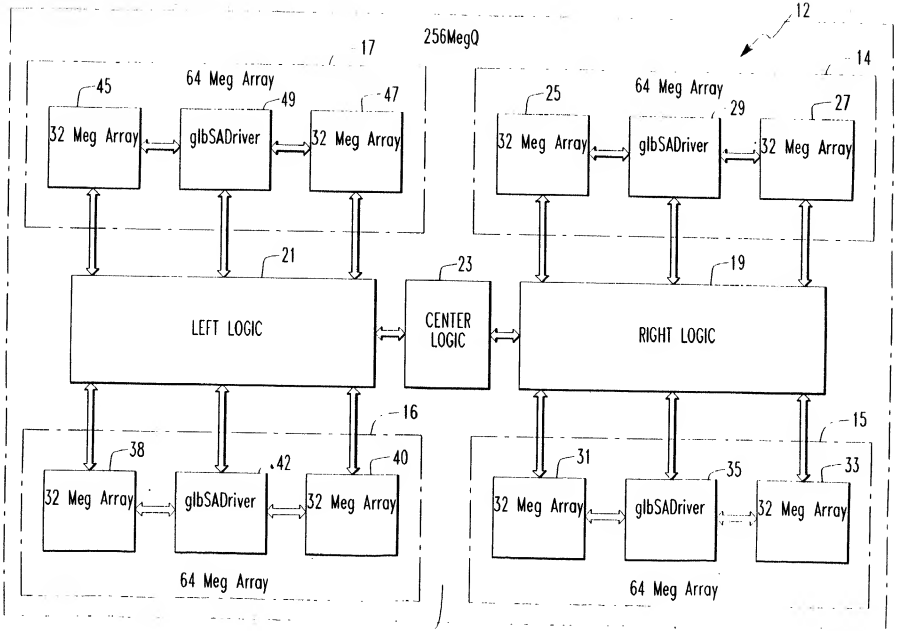


FIG. 2

FIG. 3A

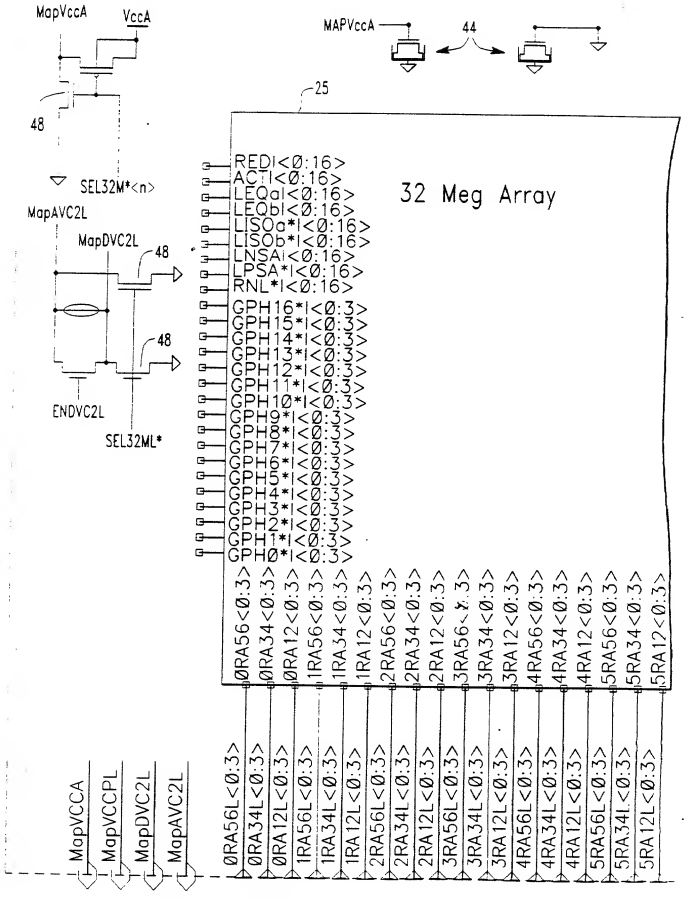

MapVccA
VccA
48
SEL32M*<n>
MapAVC2L
MapDVC2L
48
48
ENDVC2L
SEL32ML*
MAPVccA
44
25
32 Meg Array
REDI<Ø:16>
ACTI<Ø:16>
LEQaI<Ø:16>
LEQbI<Ø:16>
LISOa*I<Ø:16>
LISOb*I<Ø:16>
LNSAI<Ø:16>
LPSA*I<Ø:16>
RNL*I<Ø:16>
GPH16*<Ø:3>
GPH15*<Ø:3>
GPH14*<Ø:3>
GPH13*<Ø:3>
GPH12*<Ø:3>
GPH11*<Ø:3>
GPH10*<Ø:3>
GPH9*<Ø:3>
GPH8*<Ø:3>
GPH7*<Ø:3>
GPH6*<Ø:3>
GPH5*<Ø:3>
GPH4*<Ø:3>
GPH3*<Ø:3>
GPH2*<Ø:3>
GPH1*<Ø:3>
GPH0*<Ø:3>
ØRA56<Ø:3>
ØRA34<Ø:3>
ØRA12<Ø:3>
1RA56<Ø:3>
1RA34<Ø:3>
1RA12<Ø:3>
2RA56<Ø:3>
2RA34<Ø:3>
2RA12<Ø:3>
3RA56<Ø:3>
3RA34<Ø:3>
3RA12<Ø:3>
4RA56<Ø:3>
4RA34<Ø:3>
4RA12<Ø:3>
5RA56<Ø:3>
5RA34<Ø:3>
5RA12<Ø:3>
ØRA56L<Ø:3>
ØRA34L<Ø:3>
ØRA12L<Ø:3>
1RA56L<Ø:3>
1RA34L<Ø:3>
1RA12L<Ø:3>
2RA56L<Ø:3>
2RA34L<Ø:3>
2RA12L<Ø:3>
3RA56L<Ø:3>
3RA34L<Ø:3>
3RA12L<Ø:3>
4RA56L<Ø:3>
4RA34L<Ø:3>
4RA12L<Ø:3>
5RA56L<Ø:3>
5RA34L<Ø:3>
5RA12L<Ø:3>
MapVCCA
MapVCCPL
MapDVC2L
MapAVC2L

FIG. 3B

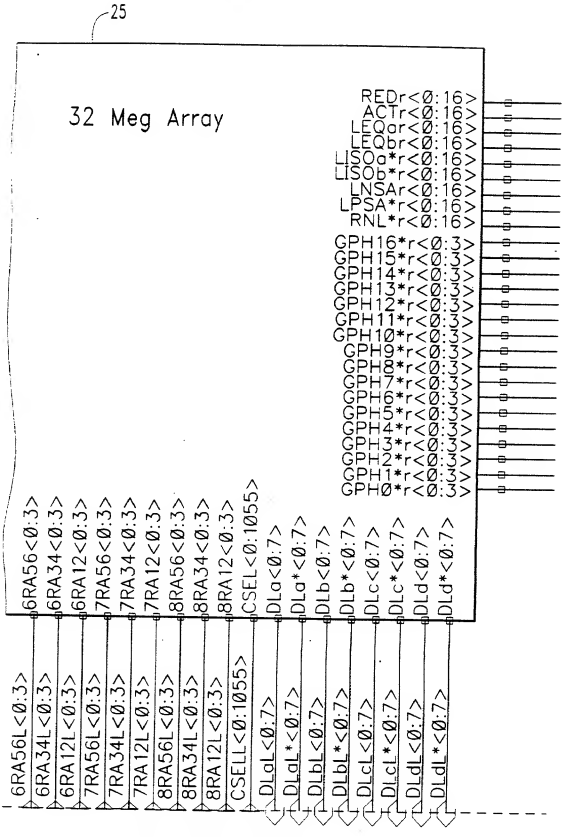

25
32 Meg Array
6RA56L<0:3>
6RA34L<0:3>
6RA12L<0:3>
7RA56L<0:3>
7RA34L<0:3>
7RA12L<0:3>
8RA56L<0:3>
8RA34L<0:3>
8RA12L<0:3>
CSELL<0:1055>
DLaL<0:7>
DLaL*<0:7>
DLbL<0:7>
DLbL*<0:7>
DLcL<0:7>
DLcL*<0:7>
DLdL<0:7>
DLdL*<0:7>
6RA56<0:3>
6RA34<0:3>
6RA12<0:3>
7RA56<0:3>
7RA34<0:3>
7RA12<0:3>
8RA56<0:3>
8RA34<0:3>
8RA12<0:3>
CSEL<0:1055>
DLa<0:7>
DLa*<0:7>
DLb<0:7>
DLb*<0:7>
DLc<0:7>
DLc*<0:7>
DLd<0:7>
DLd*<0:7>
REDr<0:16>
ACTr<0:16>
EQar<0:16>
EQbr<0:16>
LSOar<0:16>
LSObr<0:16>
LNSAr<0:16>
LPSAr<0:16>
RNLr<0:16>
GPH16*r<0:3>
GPH15*r<0:3>
GPH14*r<0:3>
GPH13*r<0:3>
GPH12*r<0:3>
GPH11*r<0:3>
GPH10*r<0:3>
GPH9*r<0:3>
GPH8*r<0:3>
GPH7*r<0:3>
GPH6*r<0:3>
GPH5*r<0:3>
GPH4*r<0:3>
GPH3*r<0:3>
GPH2*r<0:3>
GPH1*r<0:3>
GPH0*r<0:3>

FIG. 3C

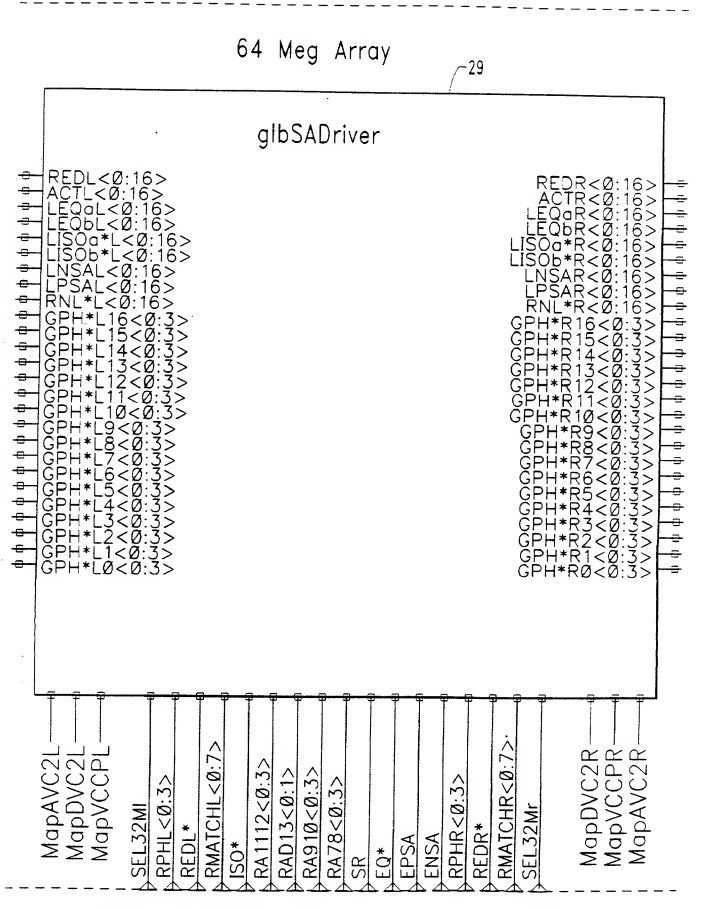
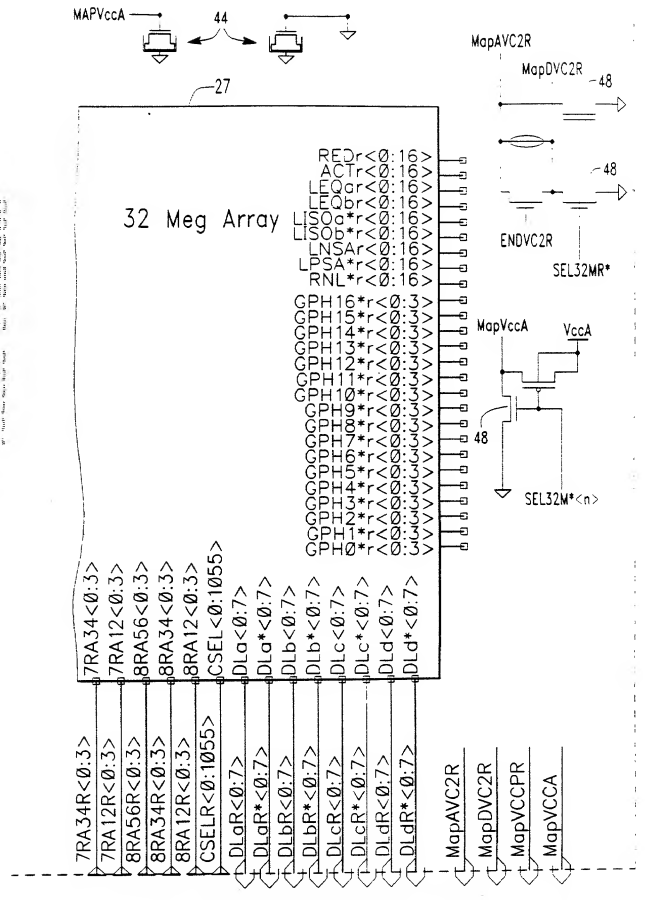

64 Meg Array
29
glbSADriver
REDL<0:16>
ACTL<0:16>
LEQaL<0:16>
LEQbL<0:16>
LISOa*L<0:16>
LISOb*L<0:16>
LNSAL<0:16>
LPSAL<0:16>
RNL*L<0:16>
GPH*L16<0:3>
GPH*L15<0:3>
GPH*L14<0:3>
GPH*L13<0:3>
GPH*L12<0:3>
GPH*L11<0:3>
GPH*L10<0:3>
GPH*L9<0:3>
GPH*L8<0:3>
GPH*L7<0:3>
GPH*L6<0:3>
GPH*L5<0:3>
GPH*L4<0:3>
GPH*L3<0:3>
GPH*L2<0:3>
GPH*L1<0:3>
GPH*L0<0:3>
REDR<0:16>
ACTR<0:16>
LEQaR<0:16>
LEQbR<0:16>
LISOa*R<0:16>
LISOb*R<0:16>
LNSAR<0:16>
LPSAR<0:16>
RNL*R<0:16>
GPH*R16<0:3>
GPH*R15<0:3>
GPH*R14<0:3>
GPH*R13<0:3>
GPH*R12<0:3>
GPH*R11<0:3>
GPH*R10<0:3>
GPH*R9<0:3>
GPH*R8<0:3>
GPH*R7<0:3>
GPH*R6<0:3>
GPH*R5<0:3>
GPH*R4<0:3>
GPH*R3<0:3>
GPH*R2<0:3>
GPH*R1<0:3>
GPH*R0<0:3>
MapAVC2L
MapDVC2L
MapVCCPL
SEL32MI
RPHL<0:3>
REDL*
RMATCHL<0:7>
ISO*
RA1112<0:3>
RAD13<0:1>
RA910<0:3>
RA78<0:3>
SR
EQ*
EPSA
ENSA
RPHR<0:3>
REDR*
RMATCHR<0:7>
SEL32Mr
MapDVC2R
MapVCCPR
MapAVC2R

FIG. 3D

27
32 Meg Array
REDI<Ø:16>
ACTI<Ø:16>
LEQOa*I<Ø:16>
LEQOb*I<Ø:16>
LISOa*I<Ø:16>
LISOb*I<Ø:16>
LNSAI<Ø:16>
LPSA*I<Ø:16>
RNL*I<Ø:16>
ØRA56<Ø:3>
ØRA34<Ø:3>
ØRA12<Ø:3>
1RA56<Ø:3>
1RA34<Ø:3>
1RA12<Ø:3>
2RA56<Ø:3>
2RA34<Ø:3>
2RA12<Ø:3>
3RA56<Ø:3>
3RA34<Ø:3>
3RA12<Ø:3>
4RA56<Ø:3>
4RA34<Ø:3>
4RA12<Ø:3>
5RA56<Ø:3>
5RA34<Ø:3>
5RA12<Ø:3>
6RA56<Ø:3>
6RA34<Ø:3>
6RA12<Ø:3>
7RA56<Ø:3>
ØRA56R<Ø:3>
ØRA34R<Ø:3>
ØRA12R<Ø:3>
1RA56R<Ø:3>
1RA34R<Ø:3>
1RA12R<Ø:3>
2RA56R<Ø:3>
2RA34R<Ø:3>
2RA12R<Ø:3>
3RA56R<Ø:3>
3RA34R<Ø:3>
3RA12R<Ø:3>
4RA56R<Ø:3>
4RA34R<Ø:3>
4RA12R<Ø:3>
5RA56R<Ø:3>
5RA34R<Ø:3>
5RA12R<Ø:3>
6RA56R<Ø:3>
6RA34R<Ø:3>
6RA12R<Ø:3>
7RA56R<Ø:3>

FIG. 3E


MAPVccA
44
27
32 Meg Array
MapAVC2R
MapDVC2R
48
48
ENDVC2R
SEL32MR*
MapVccA
VccA
48
SEL32M*<n>
REDr<0:16>
ACTr<0:16>
LEQar<0:16>
LEQbr<0:16>
LISOa*r<0:16>
LISOb*r<0:16>
LNSAr<0:16>
LPSA*r<0:16>
RNL*r<0:16>
GPH16*r<0:3>
GPH15*r<0:3>
GPH14*r<0:3>
GPH13*r<0:3>
GPH12*r<0:3>
GPH11*r<0:3>
GPH10*r<0:3>
GPH9*r<0:3>
GPH8*r<0:3>
GPH7*r<0:3>
GPH6*r<0:3>
GPH5*r<0:3>
GPH4*r<0:3>
GPH3*r<0:3>
GPH2*r<0:3>
GPH1*r<0:3>
GPH0*r<0:3>
7RA34<0:3>
7RA12<0:3>
8RA56<0:3>
8RA34<0:3>
8RA12<0:3>
CSEL<0:1055>
DLa<0:7>
DLa*<0:7>
DLb<0:7>
DLb*<0:7>
DLc<0:7>
DLc*<0:7>
DLd<0:7>
DLd*<0:7>
7RA34R<0:3>
7RA12R<0:3>
8RA56R<0:3>
8RA34R<0:3>
8RA12R<0:3>
CSELR<0:1055>
DLaR<0:7>
DLaR*<0:7>
DLbR<0:7>
DLbR*<0:7>
DLcR<0:7>
DLcR*<0:7>
DLdR<0:7>
DLdR*<0:7>
MapAVC2R
MapDVC2R
MapVCCPR
MapVCCA

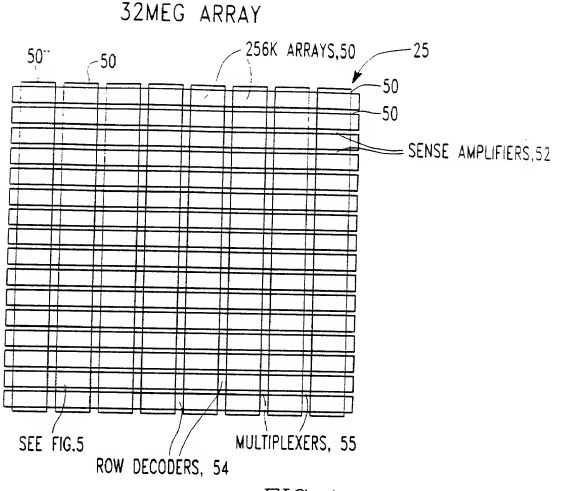

32MEG ARRAY
50
50
256K ARRAYS,50
25
50
50
SENSE AMPLIFIERS,52
SEE FIG.5
ROW DECODERS, 54
MULTIPLEXERS, 55

FIG. 4

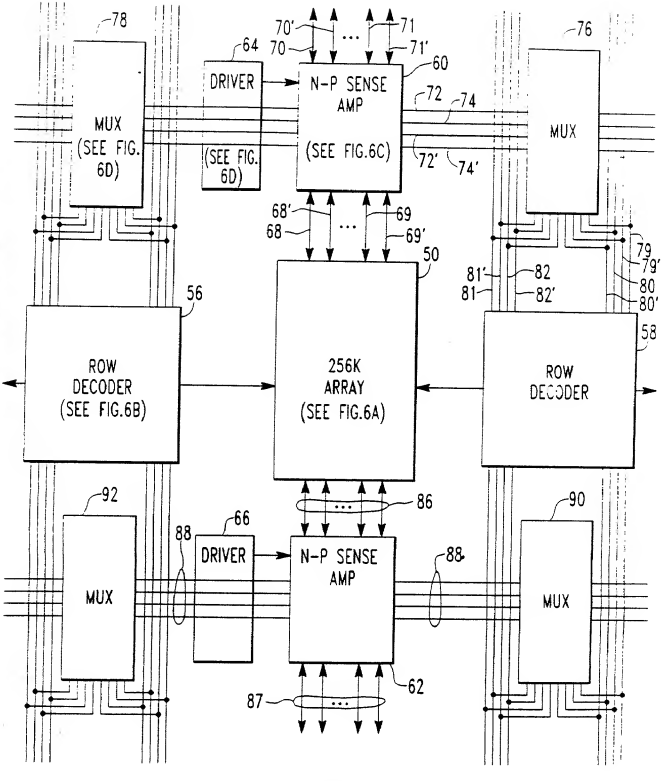

78
MUX
(SEE FIG.
6D)
64
DRIVER
(SEE FIG.
6D)
70'
70
71
71'
N-P SENSE
AMP
(SEE FIG.6C)
60
72
74
72'
74'
76
MUX
68'
68
69
69'
50
56
ROW
DECODER
(SEE FIG.6B)
256K
ARRAY
(SEE FIG.6A)
81'
81
82
82'
79
79'
80
80'
58
ROW
DECODER
92
MUX
88
66
DRIVER
N-P SENSE
AMP
86
88
90
MUX
87
62

FIG. 5

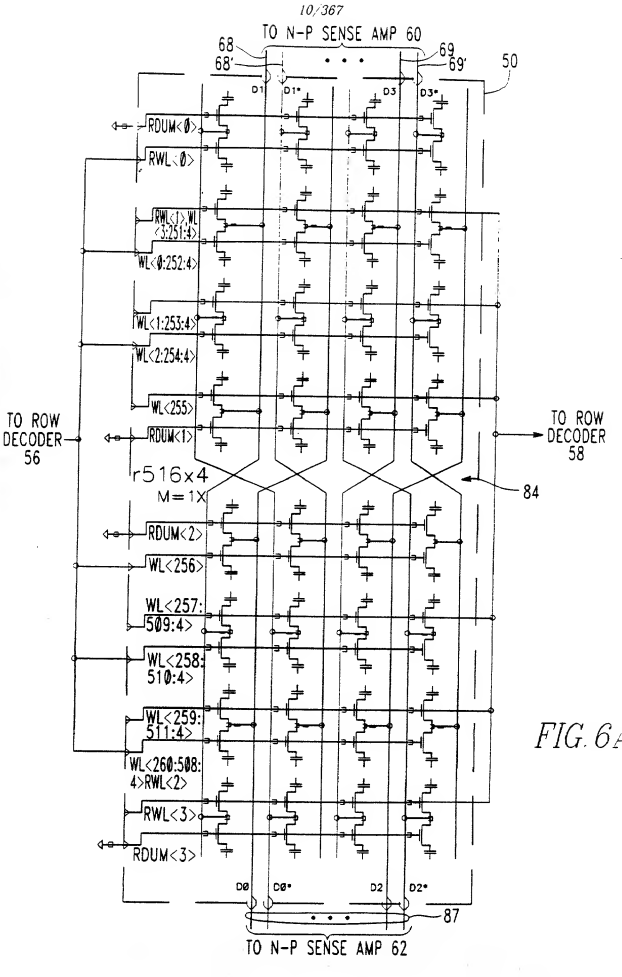

TO N-P SENSE AMP 60
68
68'
69
69'
50
D1
D1*
D3
D3*
RDUM<0>
RWL<0>
RWL<1>,WL<3:251:4>
WL<0:252:4>
WL<1:253:4>
WL<2:254:4>
WL<255>
RDUM<1>
TO ROW DECODER 56
TO ROW DECODER 58
r516x4
M=1X
84
RDUM<2>
WL<256>
WL<257:509:4>
WL<258:510:4>
WL<259:511:4>
WL<260:508:4>,RWL<2>
RWL<3>
RDUM<3>
D0
D0*
D2
D2*
87
TO N-P SENSE AMP 62

FIG. 6A

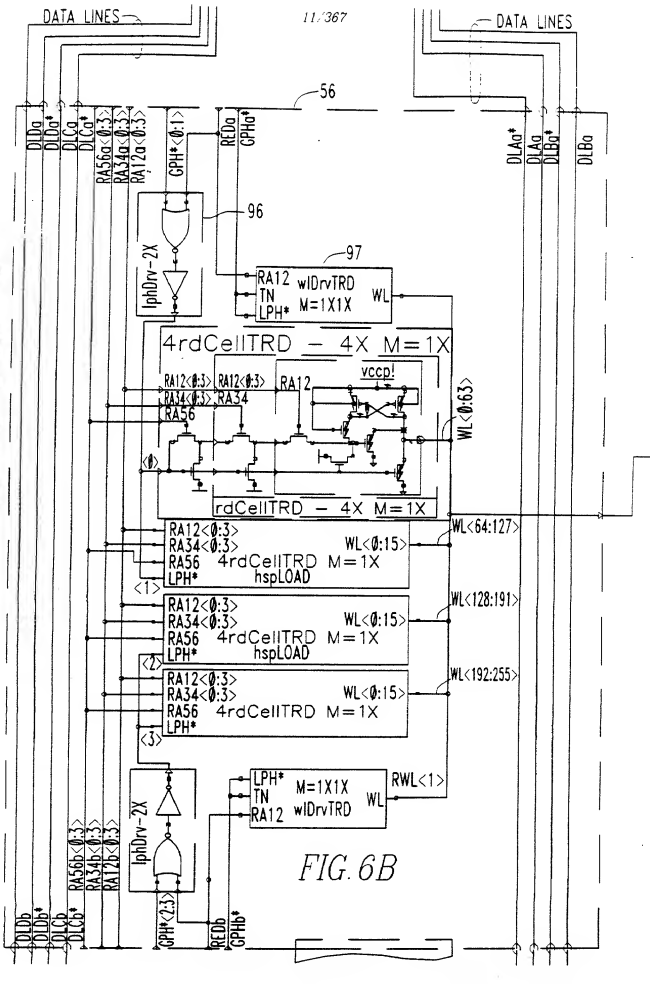

DATA LINES
11/367
DATA LINES
56
96
97
4rdCellTRD – 4X M=1X
rdCellTRD – 4X M=1X
vccp!
RA12 wlDrvTRD
TN M=1X1X
LPH*
WL
RA12<0:3>
RA34<0:3>
RA56
RA34
WL<0:63>
WL<64:127>
WL<128:191>
WL<192:255>
WL<0:15>
4rdCellTRD M=1X
hspLOAD
<1>
<2>
<3>
RWL<1>
lphDrv-2X
GPH*<2:3>
REDb
GPHb*
DLDa
DLDa*
DLCa
DLCa*
RA56a<0:3>
RA34a<0:3>
RA12a<0:3>
GPH*<0:1>
REDa
GPHa*
DLAa*
DLAa
DLBa*
DLBa
DLDb
DLDb*
DLCb
DLCb*
RA56b<0:3>
RA34b<0:3>
RA12b<0:3>

FIG. 6B

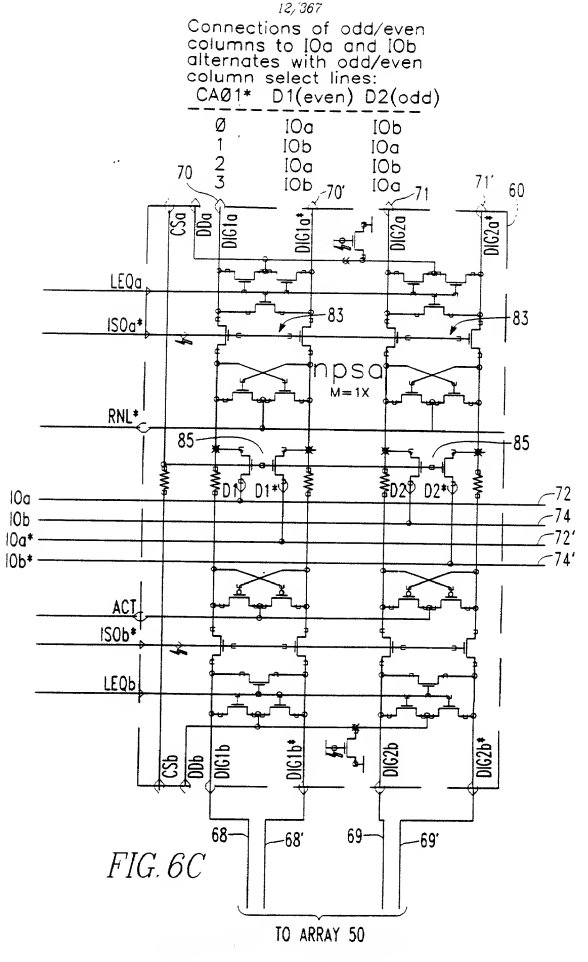

Connections of odd/even columns to IOa and IOb alternates with odd/even column select lines:
CAØ1* D1(even) D2(odd)
Ø IOa IOb
1 IOb IOa
2 IOa IOb
3 IOb IOa
70
70'
71
71'
60
CSa
DDa
DIG1a
DIG1a*
DIG2a
DIG2a*
LEQa
ISOa*
83
83
npsa
M=1X
RNL*
85
85
D1
D1*
D2
D2*
IOa
IOb
IOa*
IOb*
72
74
72'
74'
ACT
ISOb*
LEQb
CSb
DDb
DIG1b
DIG1b*
DIG2b
DIG2b*
68
68'
69
69'
TO ARRAY 50

FIG. 6C

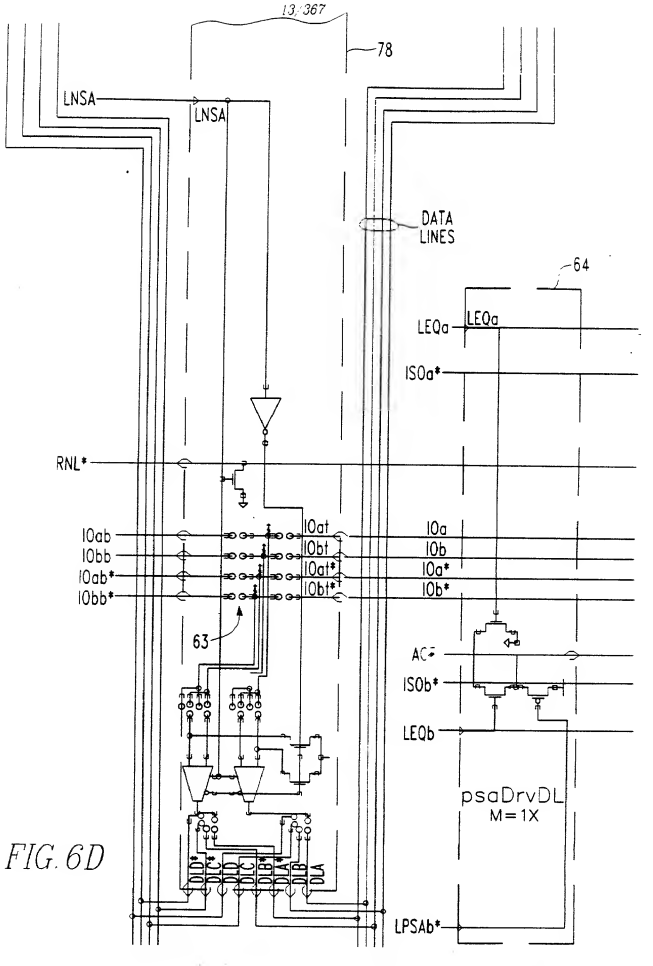

13/367
78
LNSA
LNSA
DATA
LINES
64
LEQa
LEQa
ISOa*
RNL*
IOab
IOat
IOa
IOb
IOat*
IOa*
IOb*
63
ISOb*
LEQb
psaDrvDL
M=1X
LPSAb*

FIG. 6D

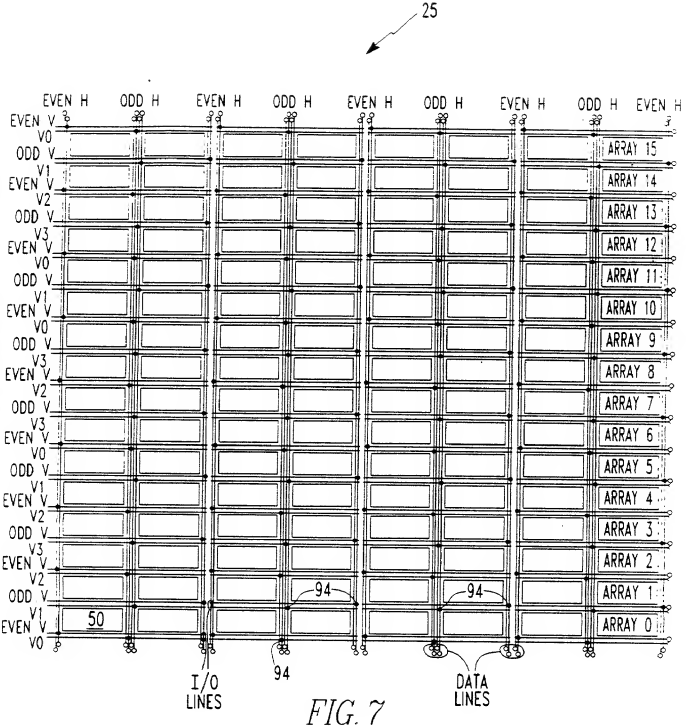

25
EVEN H
ODD H
EVEN V
V0
ODD V
V1
V2
V3
ARRAY 15
ARRAY 14
ARRAY 13
ARRAY 12
ARRAY 11
ARRAY 10
ARRAY 9
ARRAY 8
ARRAY 7
ARRAY 6
ARRAY 5
ARRAY 4
ARRAY 3
ARRAY 2
ARRAY 1
ARRAY 0
94
50
I/O LINES
DATA LINES

FIG. 7

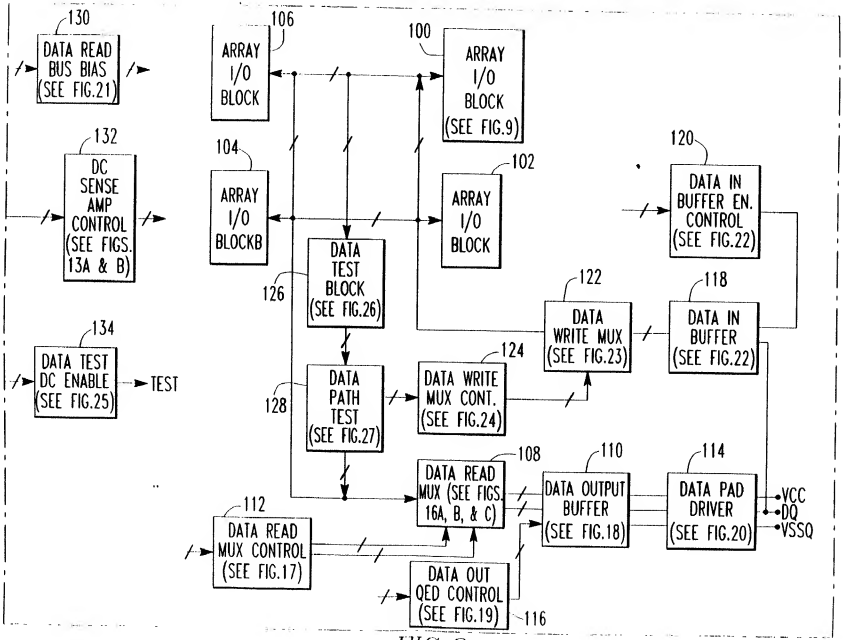


FIG. 8

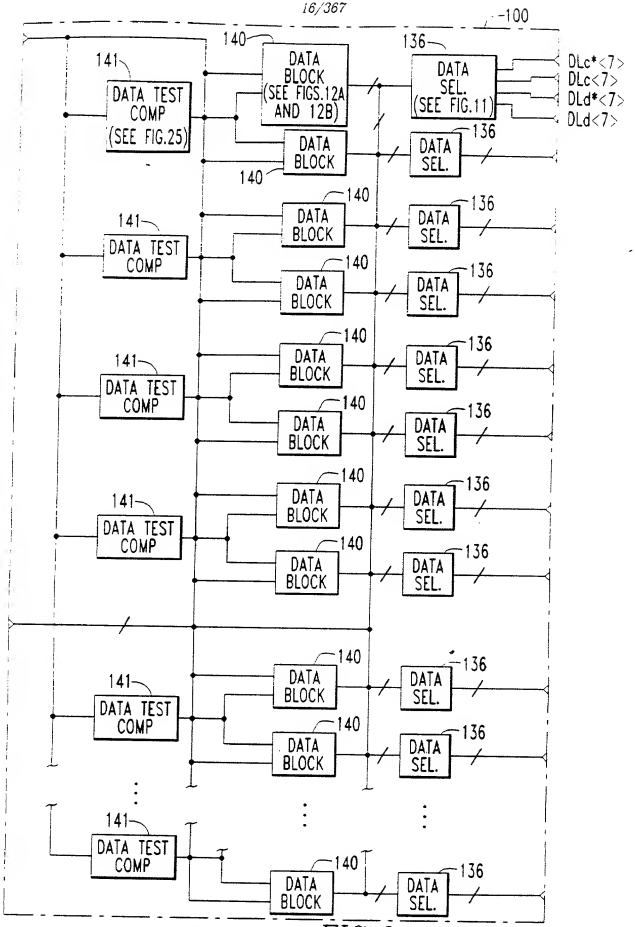

100
140
136
141
DATA BLOCK (SEE FIGS.12A AND 12B)
DATA SEL. (SEE FIG.11)
DATA TEST COMP (SEE FIG.25)
DATA BLOCK
DATA SEL.
DATA TEST COMP
DLc*<7>
DLc<7>
DLd*<7>
DLd<7>

FIG. 9

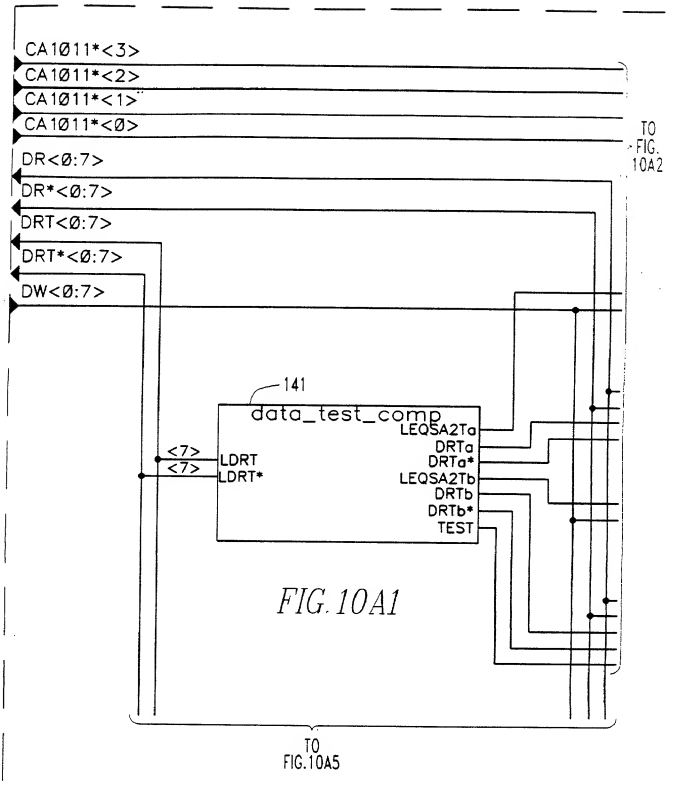

CA1Ø11*<3>
CA1Ø11*<2>
CA1Ø11*<1>
CA1Ø11*<Ø>
TO FIG. 10A2
DR<Ø:7>
DR*<Ø:7>
DRT<Ø:7>
DRT*<Ø:7>
DW<Ø:7>
141
data_test_comp
<7>
<7>
LDRT
LDRT*
LEQSA2Ta
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST
TO FIG.10A5

FIG. 10A1

FIG. 10A2

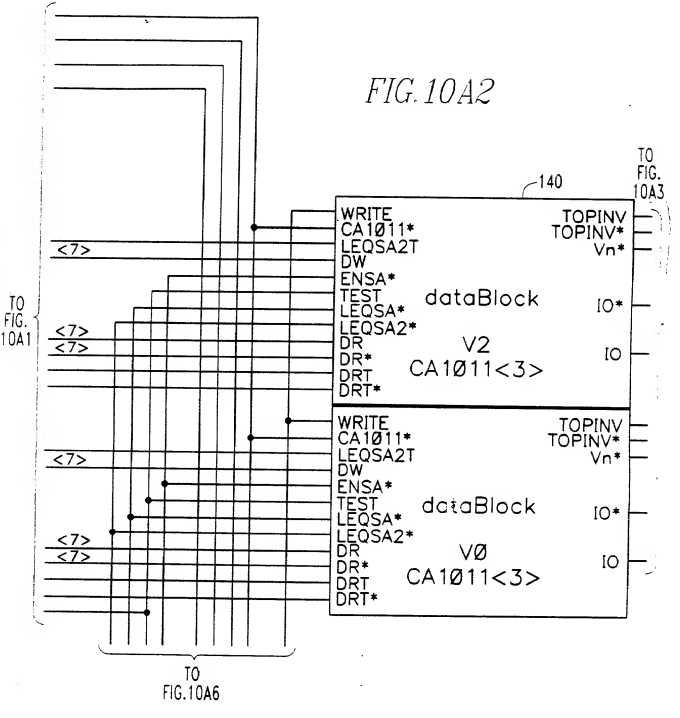
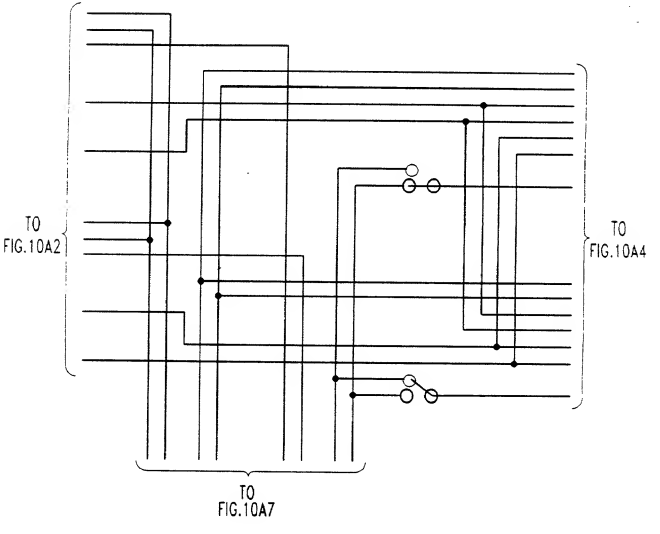

TO FIG. 10A1
<7>
<7>
<7>
<7>
<7>
TO FIG.10A6
140
TO FIG. 10A3
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V2
CA1Ø11<3>
TOPINV
TOPINV*
Vn*
IO*
IO
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
VØ
CA1Ø11<3>
TOPINV
TOPINV*
Vn*
IO*
IO

FIG. 10A3



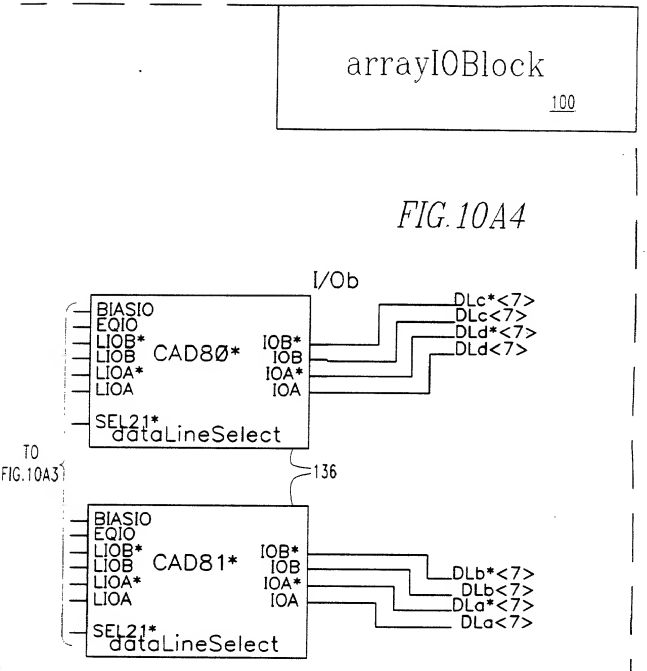

arrayIOBlock
100
I/Ob
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD80*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLc*<7>
DLc<7>
DLd*<7>
DLd<7>
TO
FIG.10A3
136
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLb*<7>
DLb<7>
DLa*<7>
DLa<7>

FIG.10A4

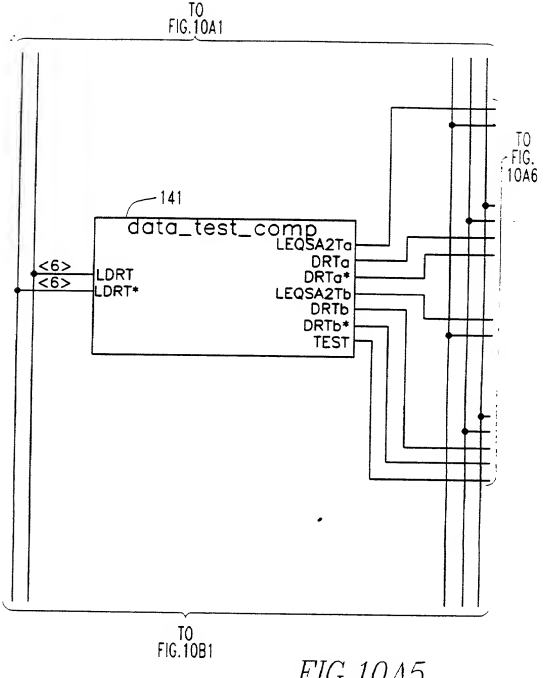

TO
FIG.10A1
TO
FIG.
10A6
141
data_test_comp
<6>
<6>
LDRT
LDRT*
LEQSA2Ta
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST
TO
FIG.10B1

FIG. 10A5

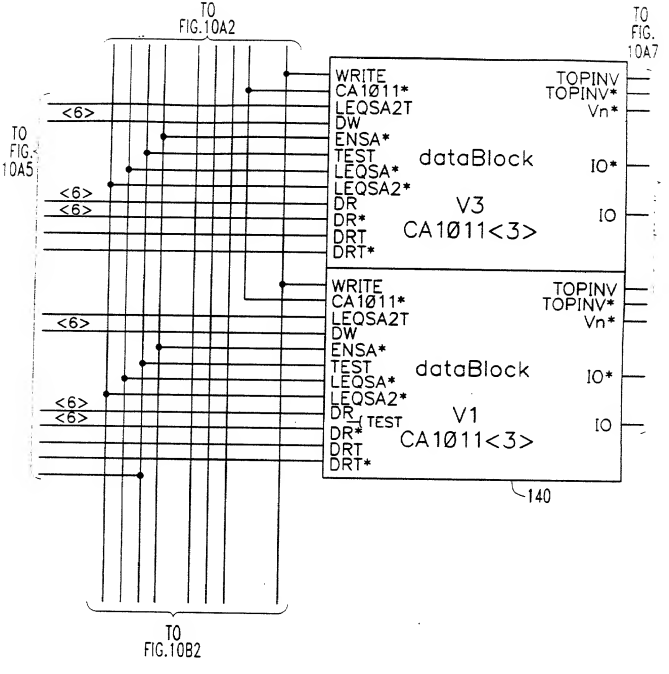

TO FIG.10A2
TO FIG. 10A7
TO FIG. 10A5
<6>
<6>
<6>
<6>
<6>
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V3
CA1Ø11<3>
TOPINV
TOPINV*
Vn*
IO*
IO
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
TEST
DR*
DRT
DRT*
dataBlock
V1
CA1Ø11<3>
TOPINV
TOPINV*
Vn*
IO*
IO
140
TO FIG.10B2

FIG. 10A6

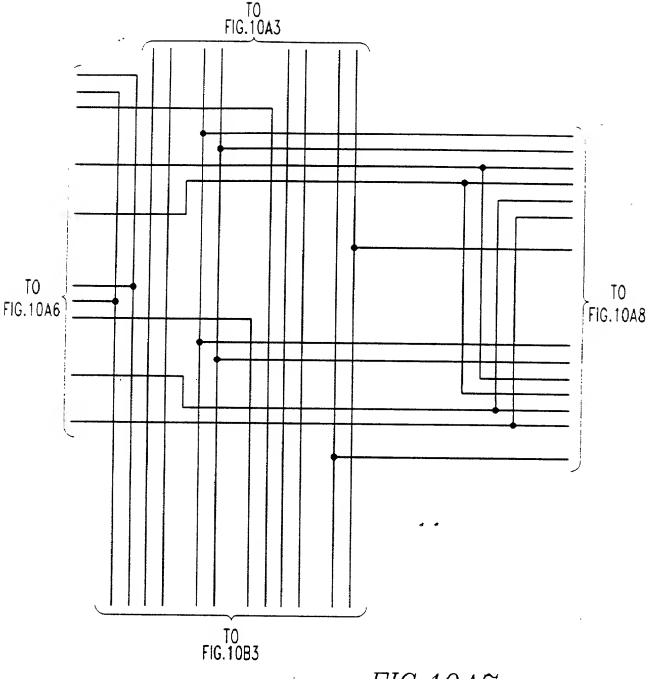


FIG.10A7

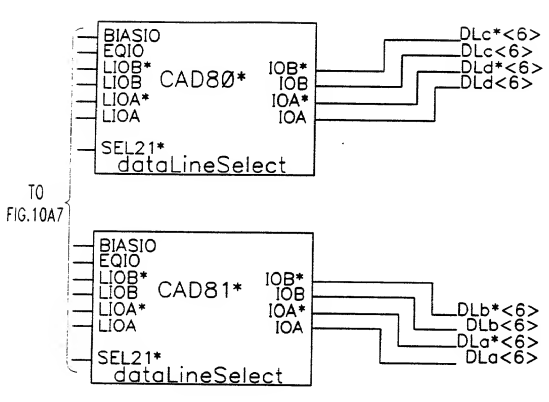

I/Oa
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD80*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLc*<6>
DLc<6>
DLd*<6>
DLd<6>
TO
FIG.10A7
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLb*<6>
DLb<6>
DLa*<6>
DLa<6>

FIG. 10A8

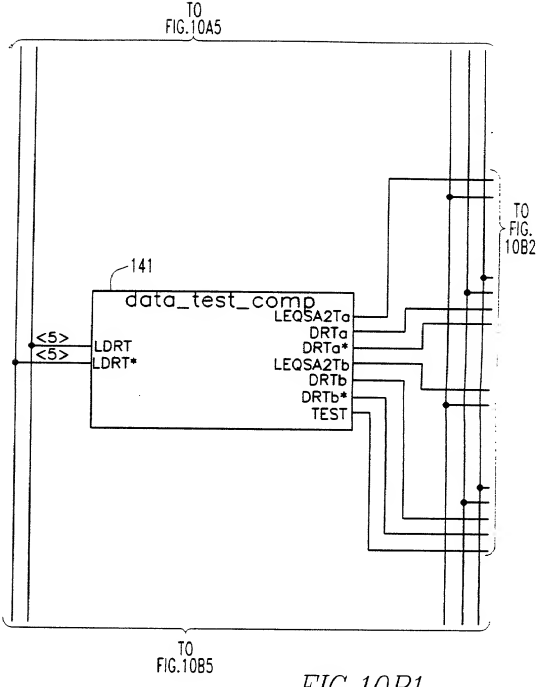

TO
FIG.10A5
TO
FIG.
10B2
141
data_test_comp
<5>
<5>
LDRT
LDRT*
LEQSA2Ta
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST
TO
FIG.10B5

FIG. 10B1

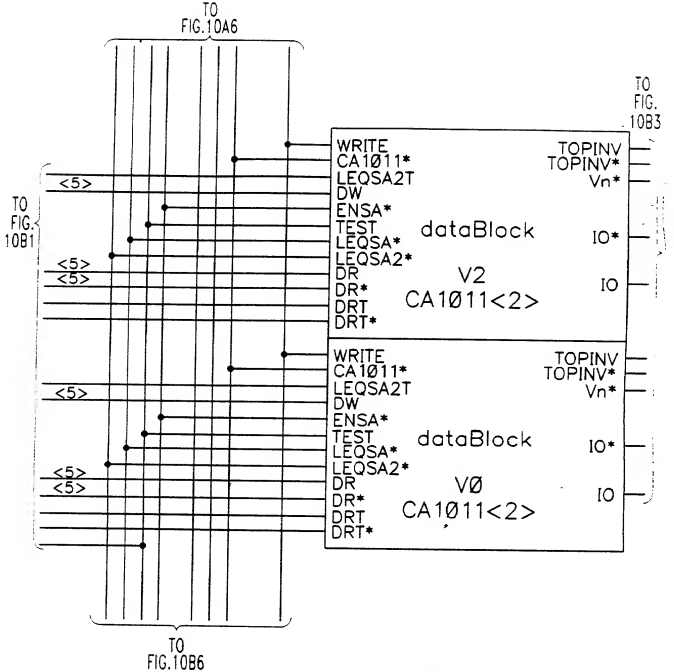

TO FIG.10A6
TO FIG. 10B3
TO FIG. 10B1
TO FIG.10B6
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V2
CA1Ø11<2>
TOPINV
TOPINV*
Vn*
IO*
IO
<5>

FIG. 10B2

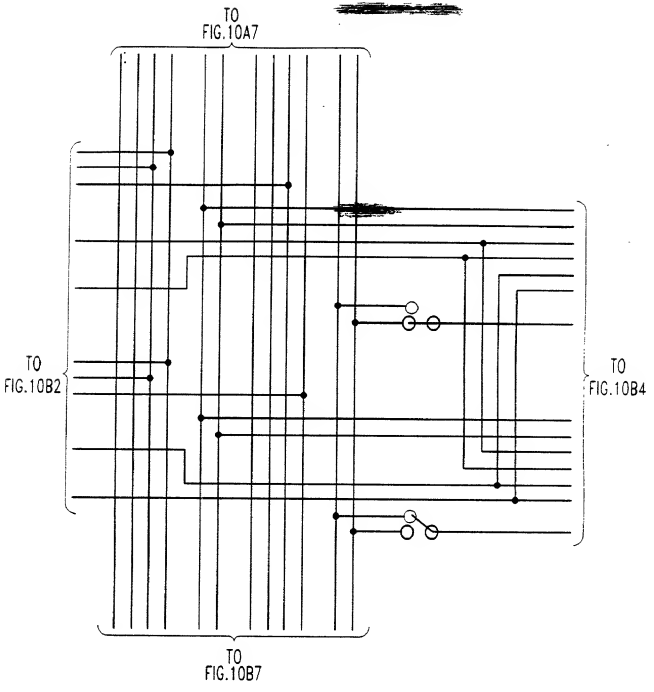


FIG.10B3

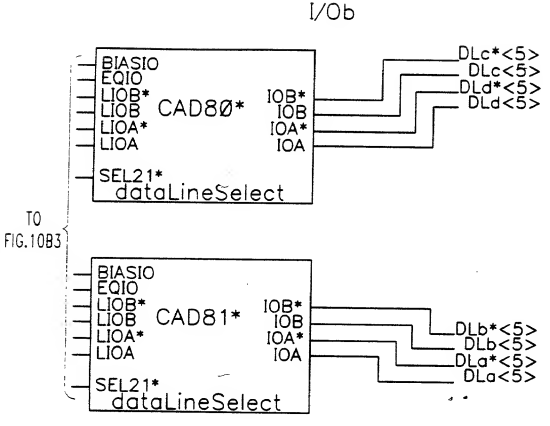

I/Ob
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD80*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLc*<5>
DLc<5>
DLd*<5>
DLd<5>
TO
FIG.10B3
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLb*<5>
DLb<5>
DLa*<5>
DLa<5>

FIG. 10B4

FIG. 10B5

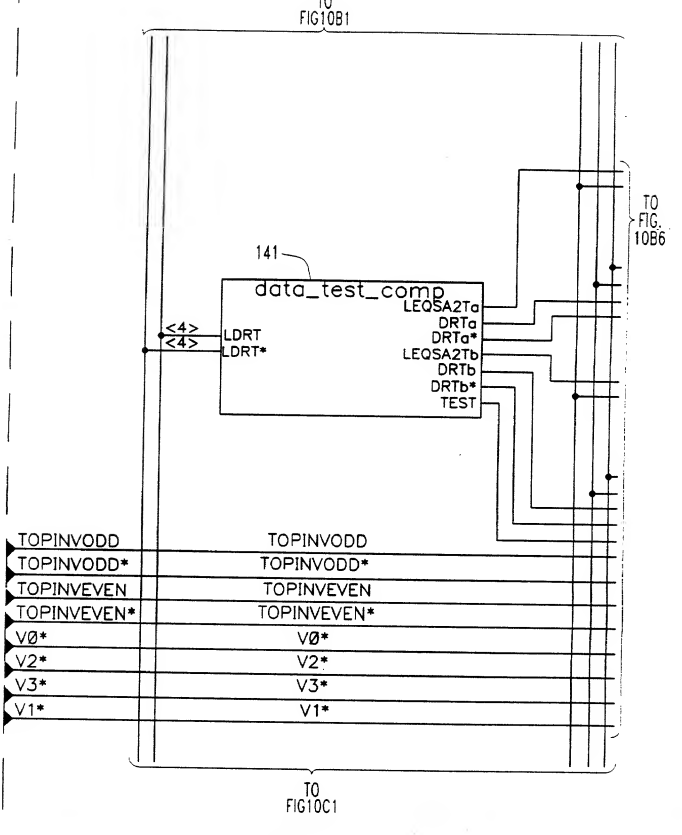

TO FIG10B1
TO FIG. 10B6
141
data_test_comp
LEQSA2Ta
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST
<4>
<4>
LDRT
LDRT*
TOPINVODD
TOPINVODD*
TOPINVEVEN
TOPINVEVEN*
VØ*
V2*
V3*
V1*
TO FIG10C1

FIG. 10B6

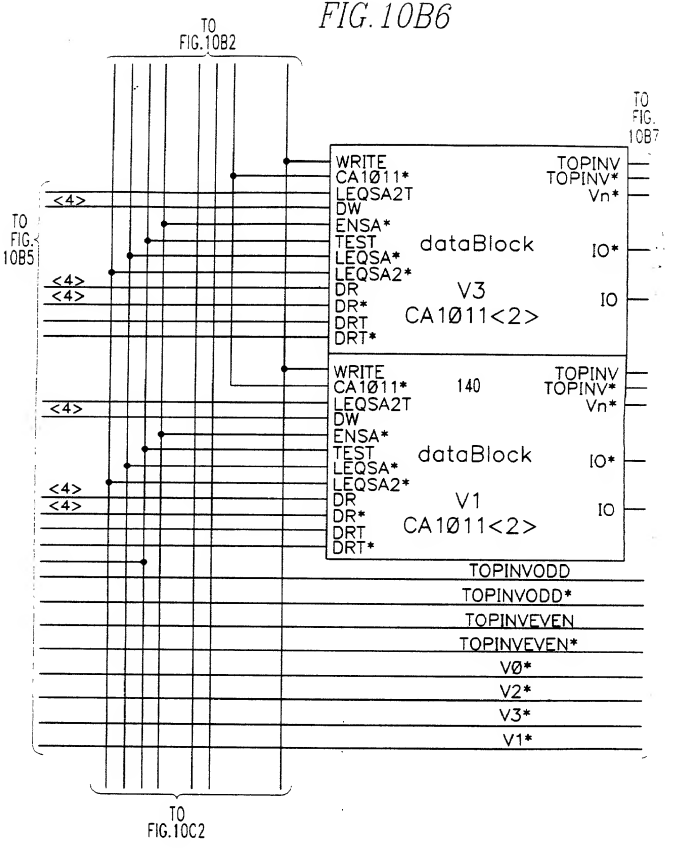

TO FIG.10B2
TO FIG. 10B7
TO FIG. 10B5
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V3
CA1Ø11<2>
TOPINV
TOPINV*
Vn*
IO*
IO
140
dataBlock
V1
CA1Ø11<2>
<4>
TOPINVODD
TOPINVODD*
TOPINVEVEN
TOPINVEVEN*
VØ*
V2*
V3*
V1*
TO FIG.10C2

FIG. 10B7

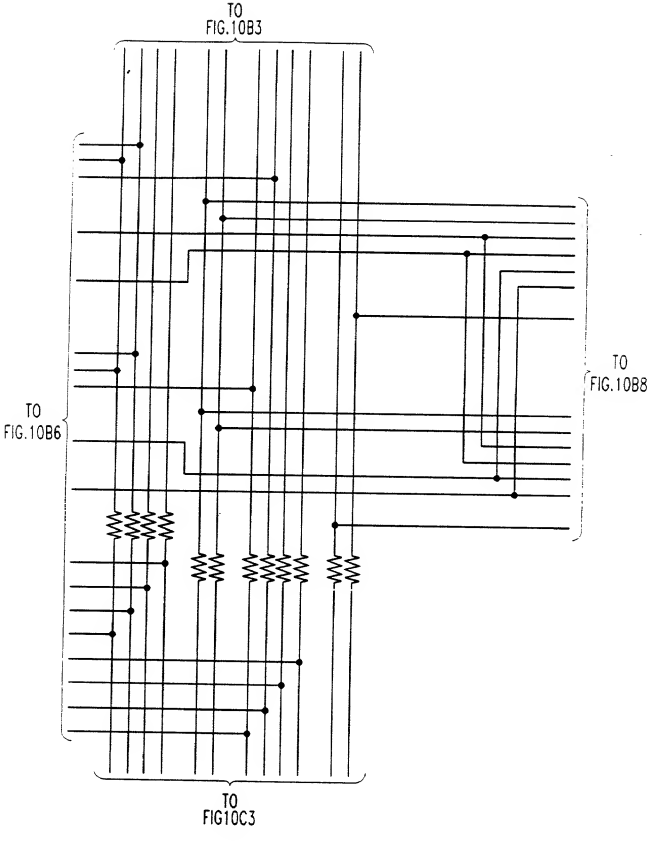
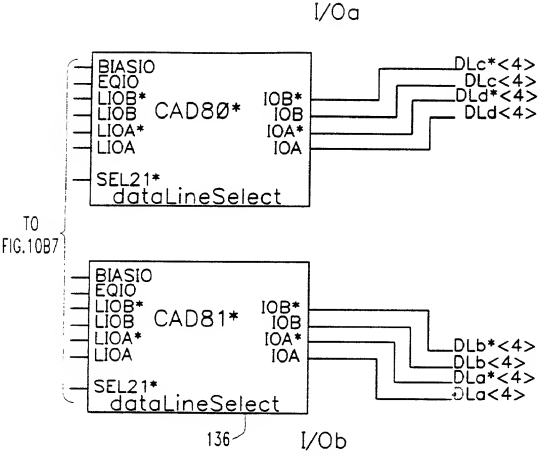


FIG. 10B8


I/Oa
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD80*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLc*<4>
DLc<4>
DLd*<4>
DLd<4>
TO
FIG.10B7
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLb*<4>
DLb<4>
DLa*<4>
DLa<4>
136
I/Ob

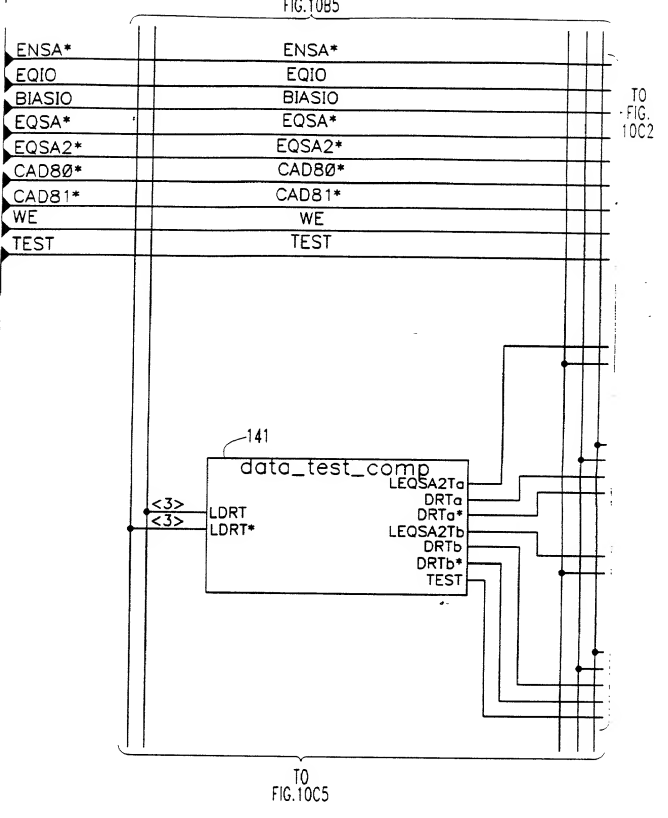

TO FIG.10B5
ENSA*
EQIO
BIASIO
EQSA*
EQSA2*
CAD80*
CAD81*
WE
TEST
TO FIG. 10C2
141
data_test_comp
<3>
<3>
LDRT
LDRT*
LEQSA2Ta
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST
TO FIG.10C5

FIG. 10C1

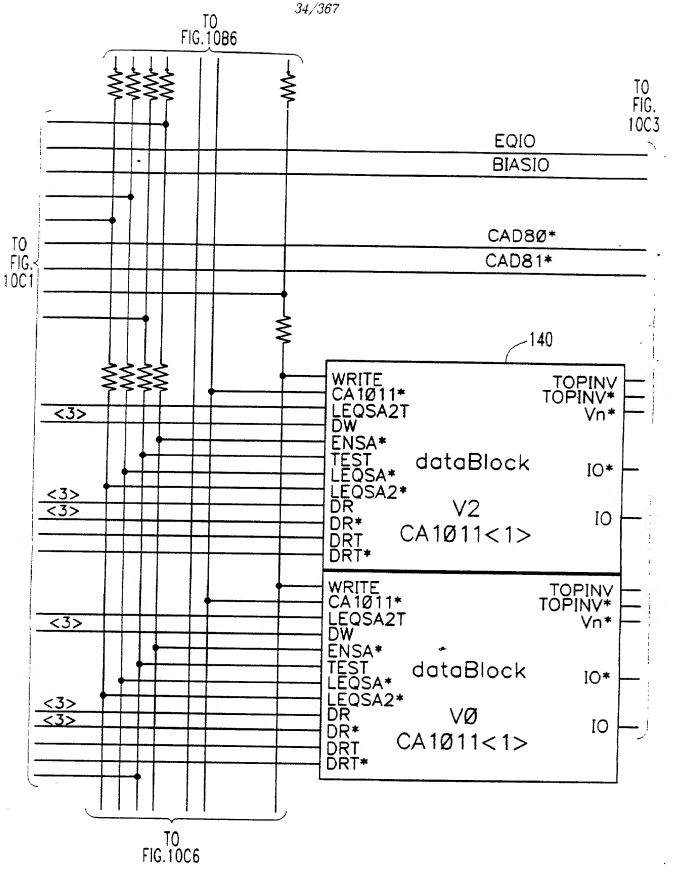

TO FIG.10B6
TO FIG. 10C3
EQIO
BIASIO
TO FIG. 10C1
CAD8Ø*
CAD81*
140
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V2
CA1Ø11<1>
TOPINV
TOPINV*
Vn*
IO*
IO
<3>
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
VØ
CA1Ø11<1>
TOPINV
TOPINV*
Vn*
IO*
IO
<3>
TO FIG.10C6

FIG. 10C2

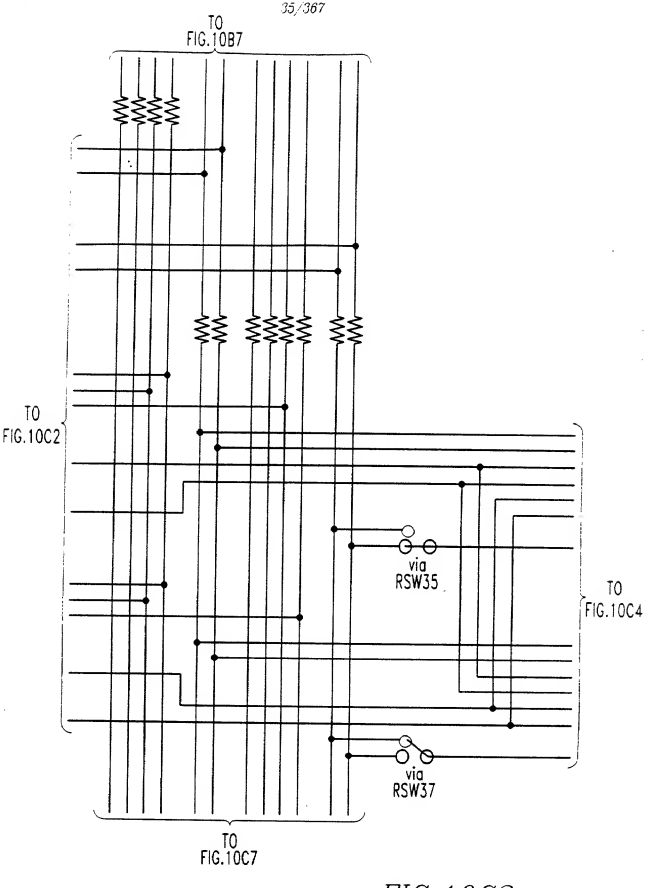
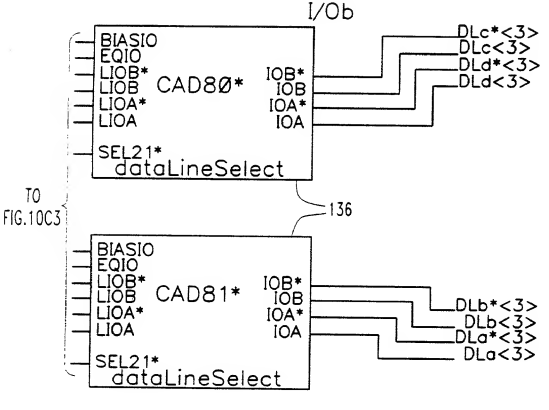

TO
FIG.10B7
TO
FIG.10C2
via
RSW35
TO
FIG.10C4
via
RSW37
TO
FIG.10C7

FIG. 10C3

FIG. 10C4


I/Ob
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD80*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLc*<3>
DLc<3>
DLd*<3>
DLd<3>
TO
FIG.10C3
136
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLb*<3>
DLb<3>
DLa*<3>
DLa<3>

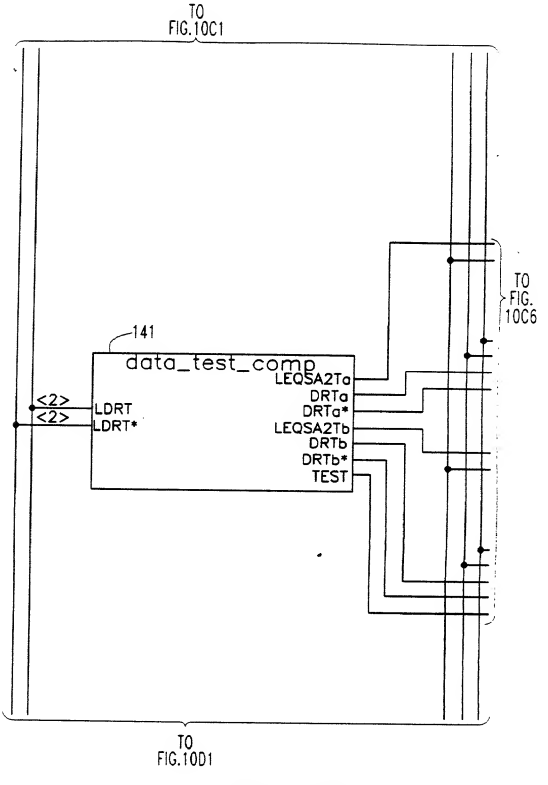

TO
FIG.10C1
TO
FIG.
10C6
141
data_test_comp
<2>
<2>
LDRT
LDRT*
LEQSA2To
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST
TO
FIG.10D1

FIG.10C5

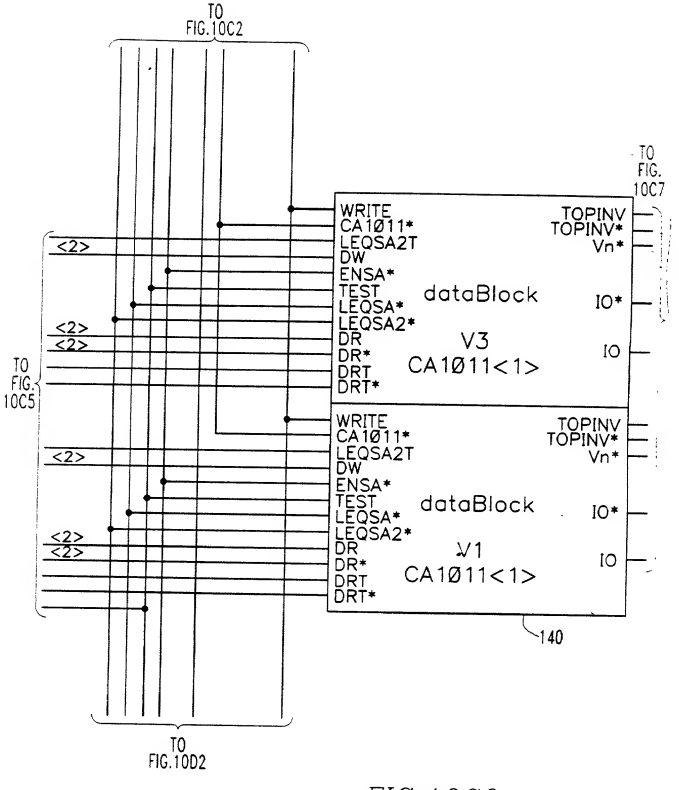

TO FIG.10C2
TO FIG. 10C7
TO FIG. 10C5
TO FIG.10D2
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V3
CA1Ø11<1>
TOPINV
TOPINV*
Vn*
IO*
IO
V1
140
<2>

FIG. 10C6

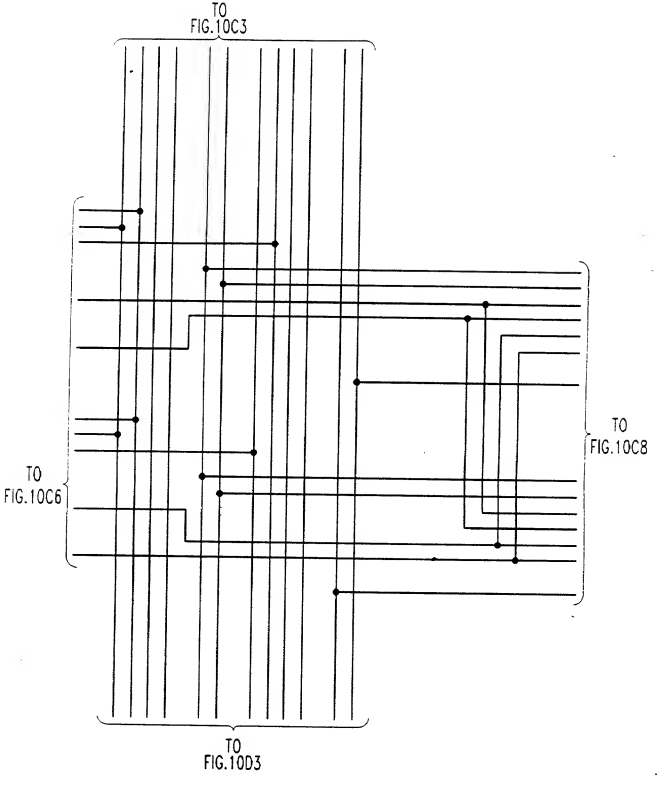


FIG. 10C7

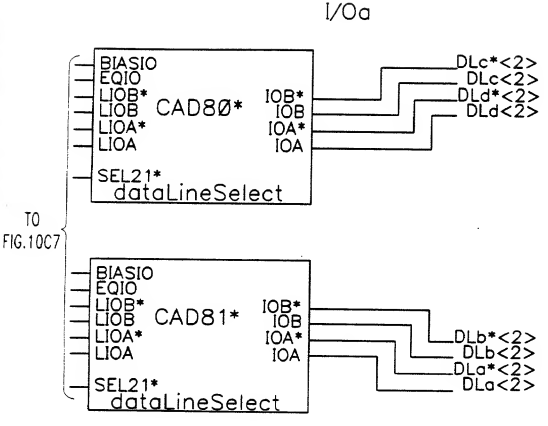

I/Oa
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD8Ø*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLc*<2>
DLc<2>
DLd*<2>
DLd<2>
TO
FIG.10C7
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLb*<2>
DLb<2>
DLa*<2>
DLa<2>

FIG. 10C8

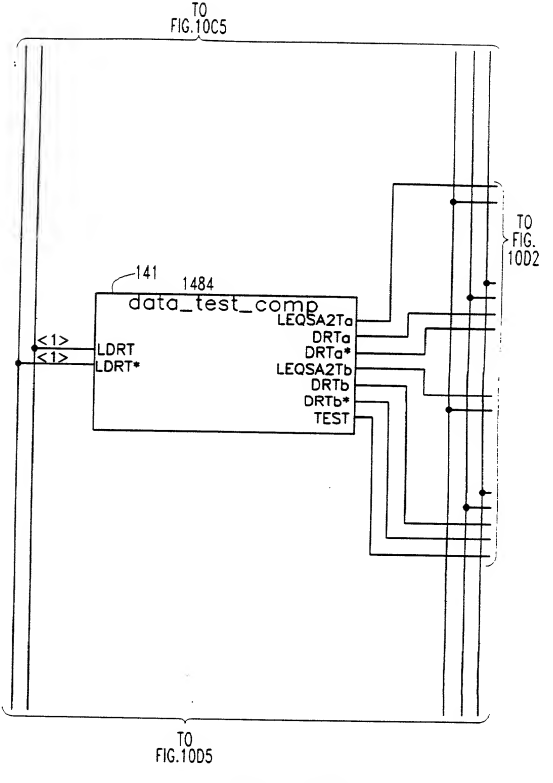

TO
FIG.10C5
TO
FIG.
10D2
141
1484
data_test_comp
<1>
<1>
LDRT
LDRT*
LEQSA2Ta
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST
TO
FIG.10D5

FIG. 10D1

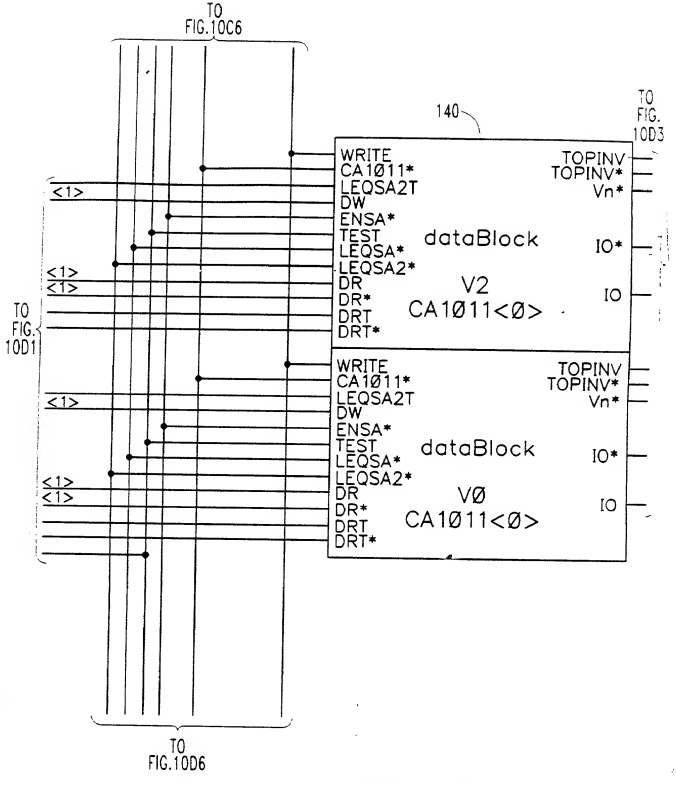

TO FIG.10C6
140
TO FIG. 10D3
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V2
CA1Ø11<Ø>
TOPINV
TOPINV*
Vn*
IO*
IO
<1>
TO FIG. 10D1
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
VØ
CA1Ø11<Ø>
TOPINV
TOPINV*
Vn*
IO*
IO
TO FIG.10D6

FIG. 10D2

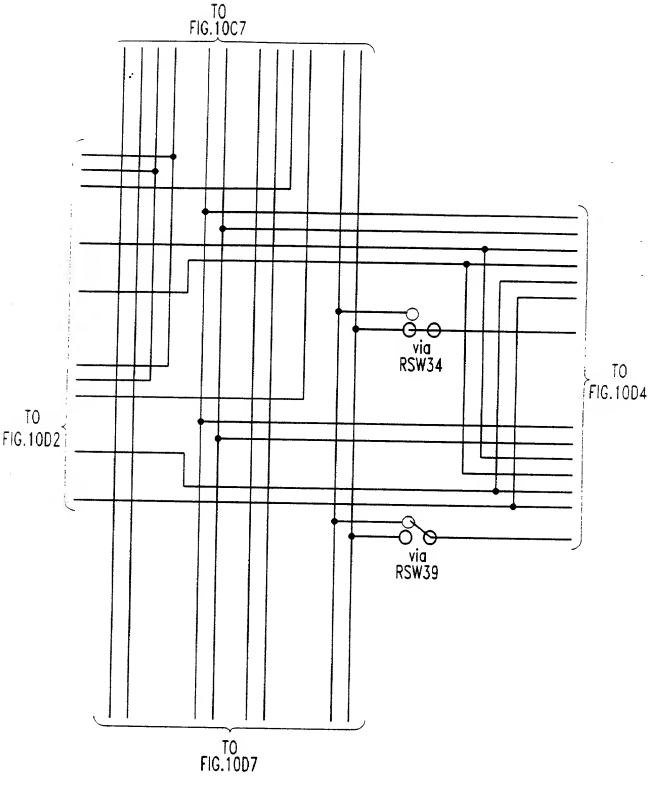

TO
FIG.10C7
TO
FIG.10D2
via
RSW34
TO
FIG.10D4
via
RSW39
TO
FIG.10D7

FIG. 10D3

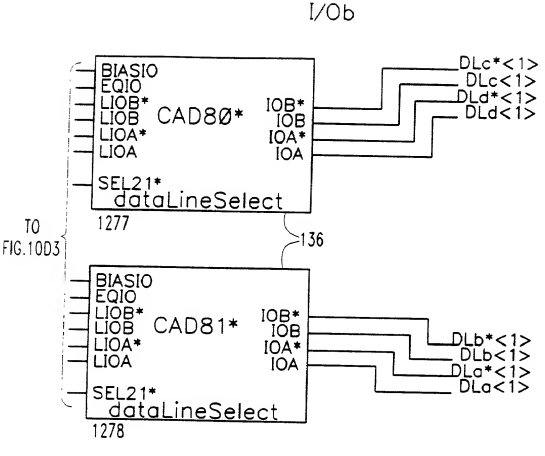

I/Ob
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD80*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
1277
DLc*<1>
DLc<1>
DLd*<1>
DLd<1>
TO
FIG.10D3
136
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
1278
DLb*<1>
DLb<1>
DLa*<1>
DLa<1>

FIG. 10D4

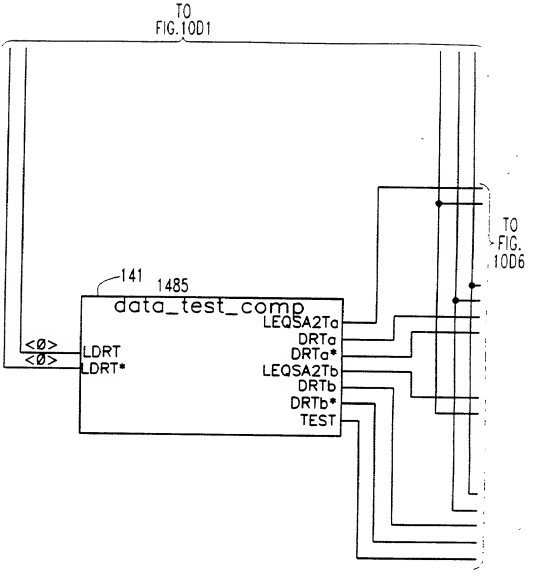

TO
FIG.10D1
TO
FIG.
10D6
141
1485
data_test_comp
<Ø>
<Ø>
LDRT
LDRT*
LEQSA2Ta
DRTa
DRTa*
LEQSA2Tb
DRTb
DRTb*
TEST

FIG. 10D5

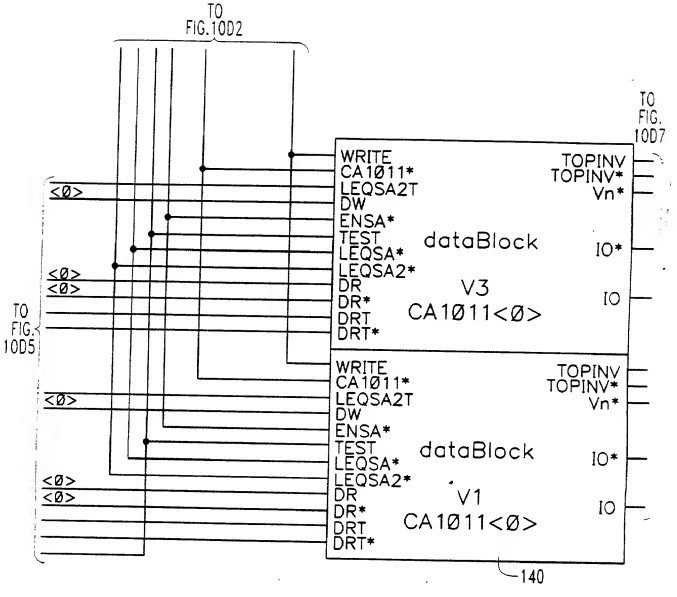

TO
FIG.10D2
TO
FIG.
10D7
TO
FIG.
10D5
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V3
CA1Ø11<Ø>
TOPINV
TOPINV*
Vn*
IO*
IO
<Ø>
<Ø>
<Ø>
<Ø>
<Ø>
<Ø>
WRITE
CA1Ø11*
LEQSA2T
DW
ENSA*
TEST
LEQSA*
LEQSA2*
DR
DR*
DRT
DRT*
dataBlock
V1
CA1Ø11<Ø>
TOPINV
TOPINV*
Vn*
IO*
IO
140

FIG. 10D6

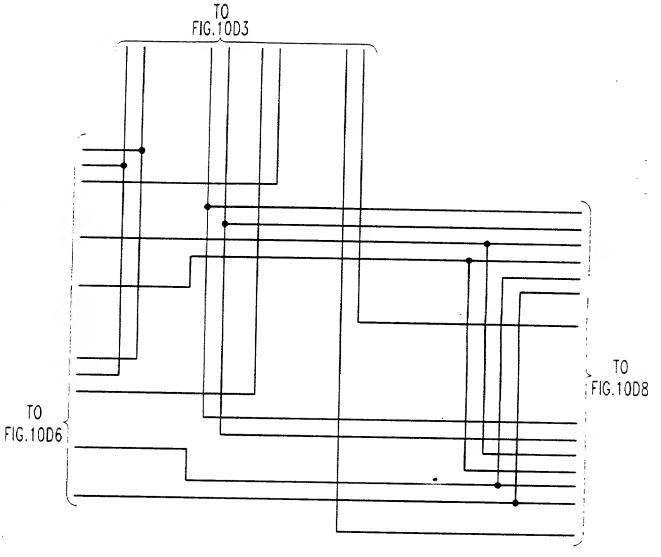


FIG.10D7

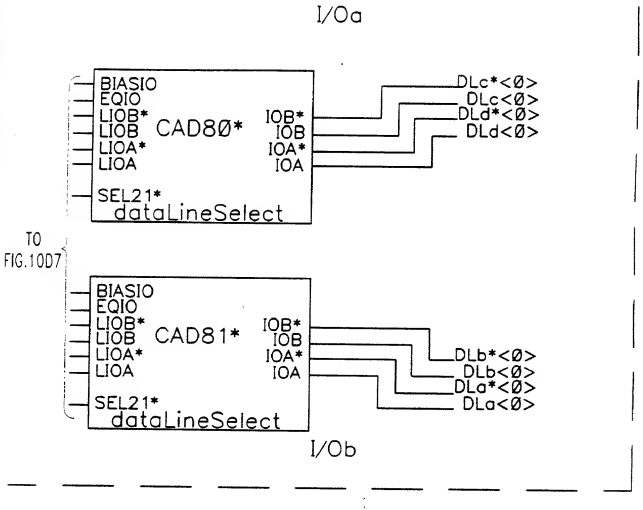

I/Oa
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD80*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLc*<0>
DLc<0>
DLd*<0>
DLd<0>
TO
FIG.10D7
BIASIO
EQIO
LIOB*
LIOB
LIOA*
LIOA
CAD81*
IOB*
IOB
IOA*
IOA
SEL21*
dataLineSelect
DLb*<0>
DLb<0>
DLa*<0>
DLa<0>
I/Ob

FIG. 10D8

FIG. 11-1

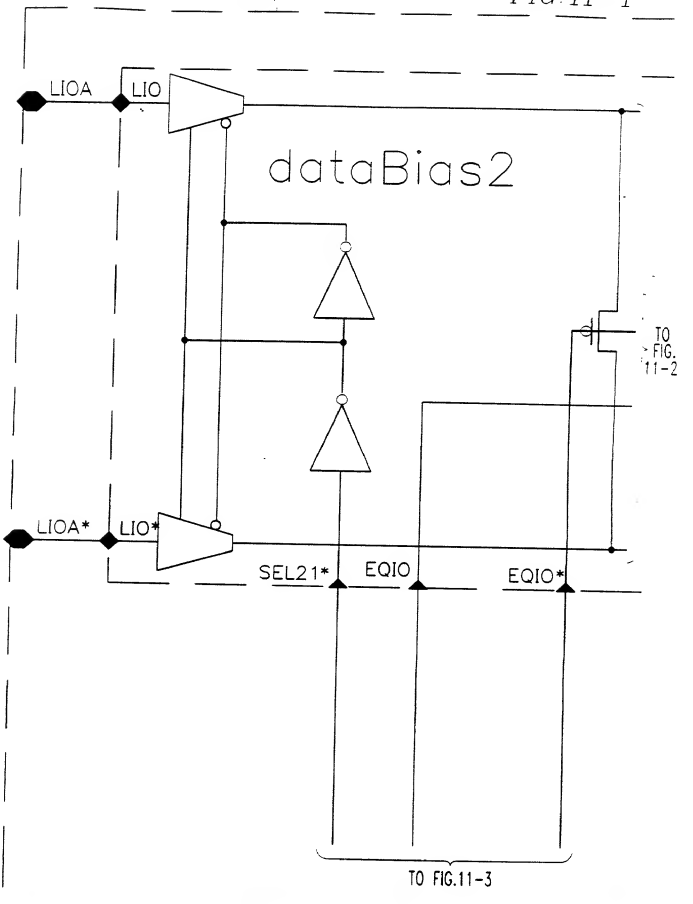
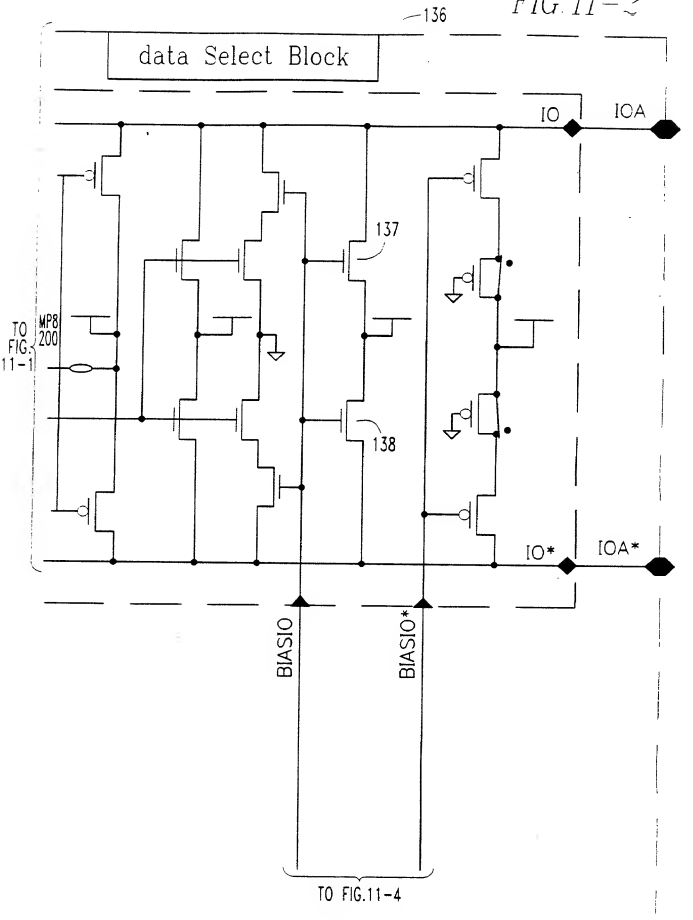

136
LIOA
LIO
dataBias2
TO FIG. 11-2
LIOA*
LIO*
SEL21*
EQIO
EQIO*
TO FIG.11-3

FIG. 11-2


136
data Select Block
IO
IOA
137
TO FIG. 11-1
MP8 200
138
IO*
IOA*
BIASIO
BIASIO*
TO FIG.11-4

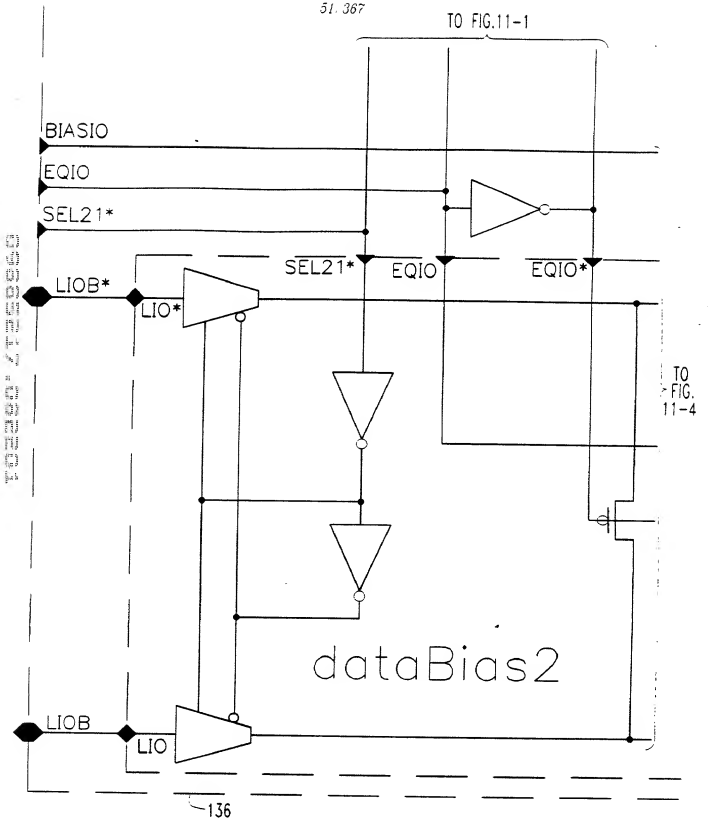

51.367
TO FIG.11-1
BIASIO
EQIO
SEL21*
SEL21*
EQIO
EQIO*
LIOB*
LIO*
TO FIG. 11-4
dataBias2
LIOB
LIO
136

FIG. 11-3

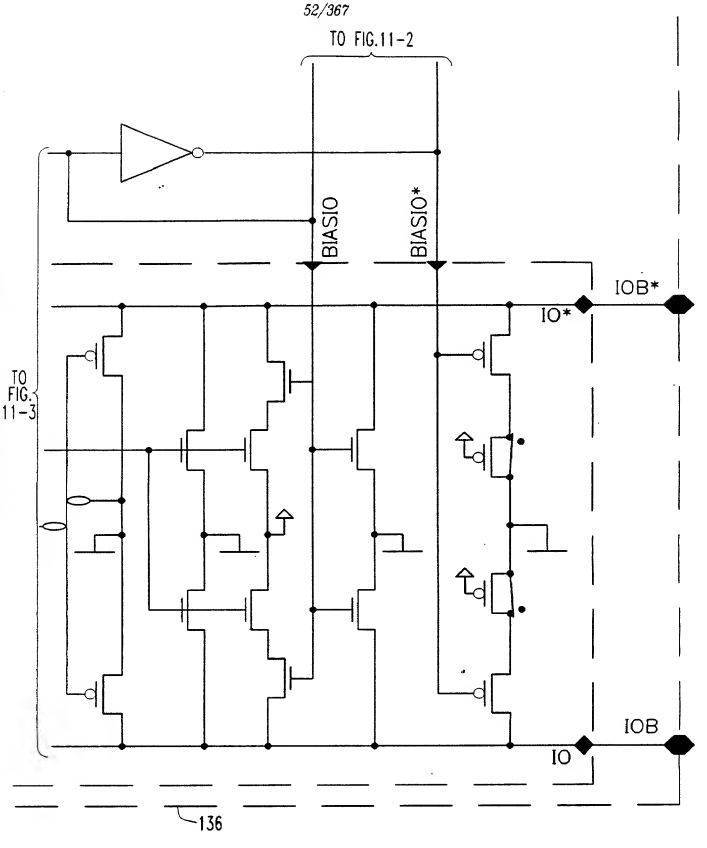


FIG. 11-4

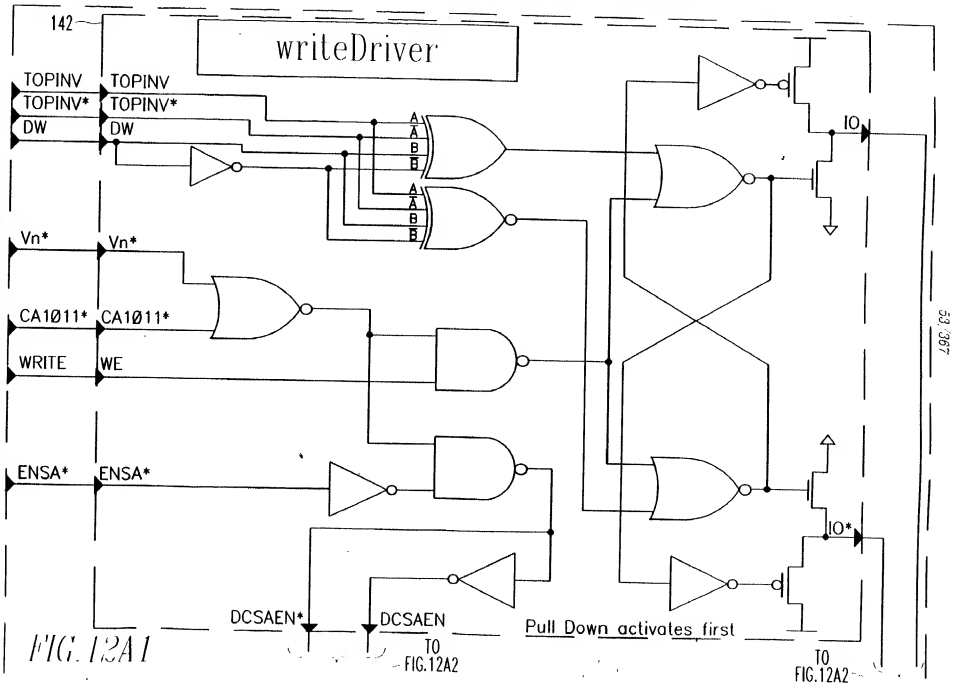


FIG. 12A1

53 367

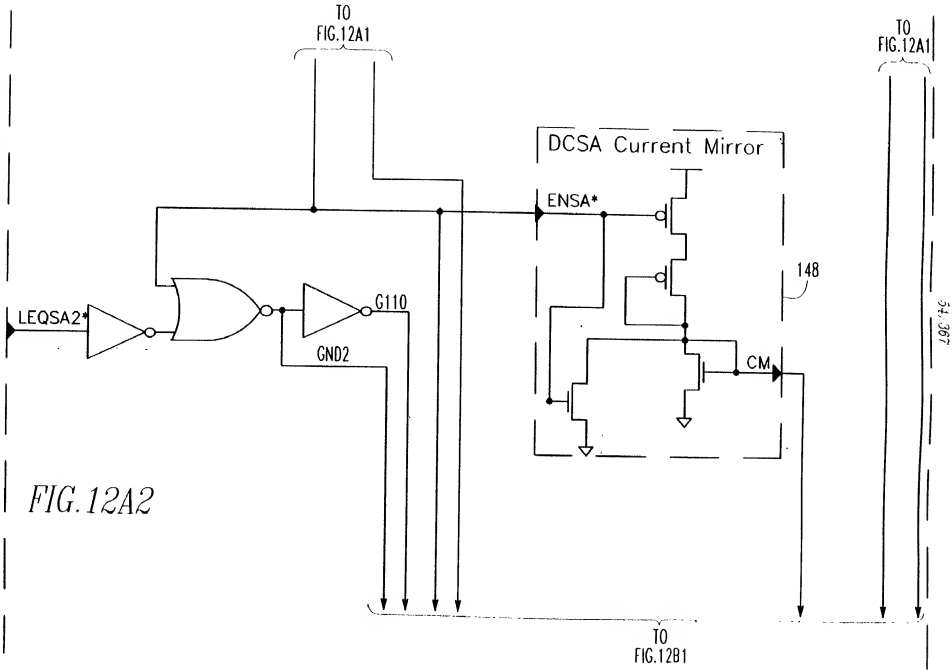
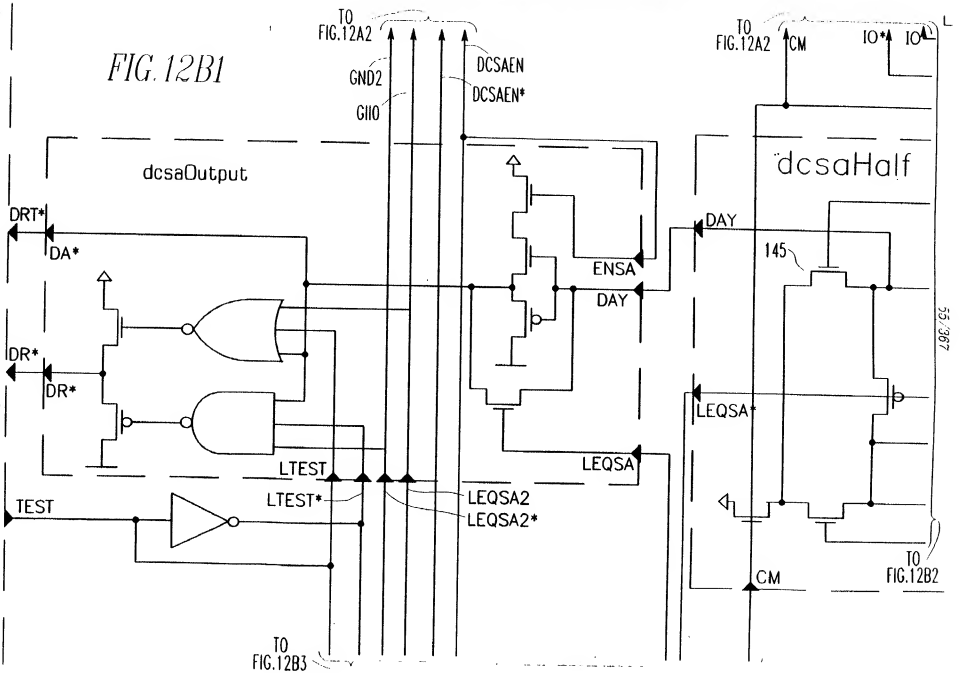


FIG.12A2

FIG. 12B1


TO FIG.12A2
GND2
GIIO
DCSAEN
DCSAEN*
TO FIG.12A2
CM
IO*
IO
dcsaOutput
dcsaHalf
DRT*
DA*
DR*
DR*
ENSA
DAY
DAY
145
LEQSA*
LEQSA
LTEST
LTEST*
TEST
LEQSA2
LEQSA2*
CM
TO FIG.12B2
TO FIG.12B3

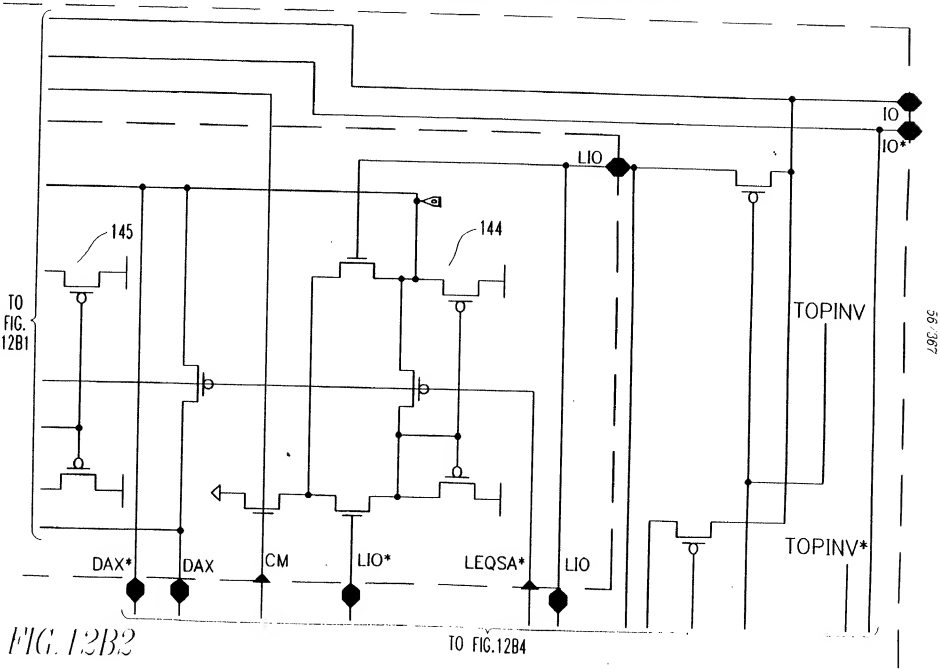

IO
IO*
LIO
145
144
TO
FIG.
12B1
TOPINV
TOPINV*
DAX*
DAX
CM
LIO*
LEQSA*
LIO
TO FIG.12B4

FIG. 12B2

FIG. 12B3

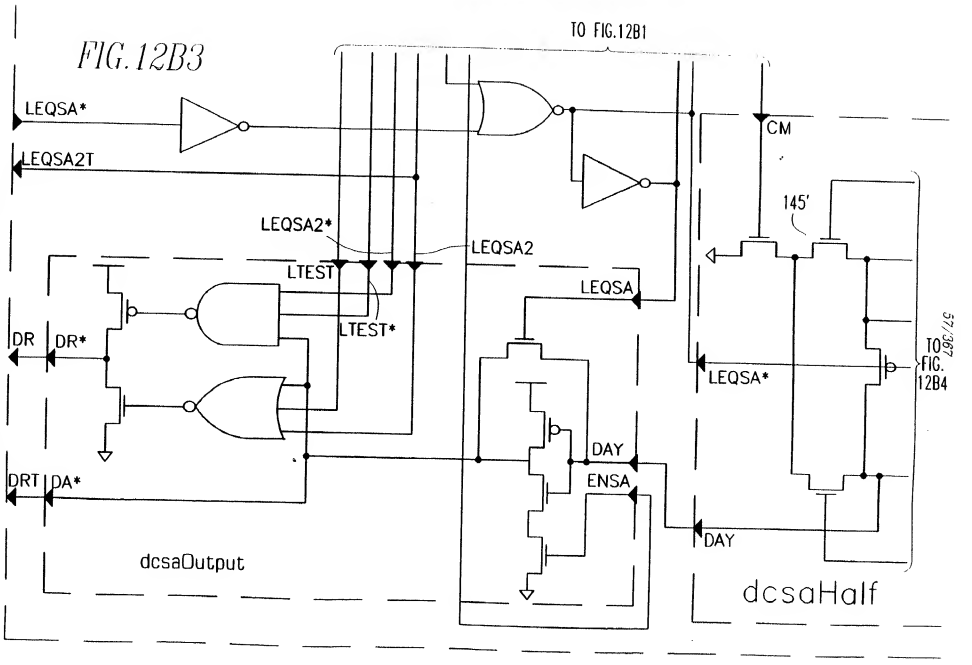
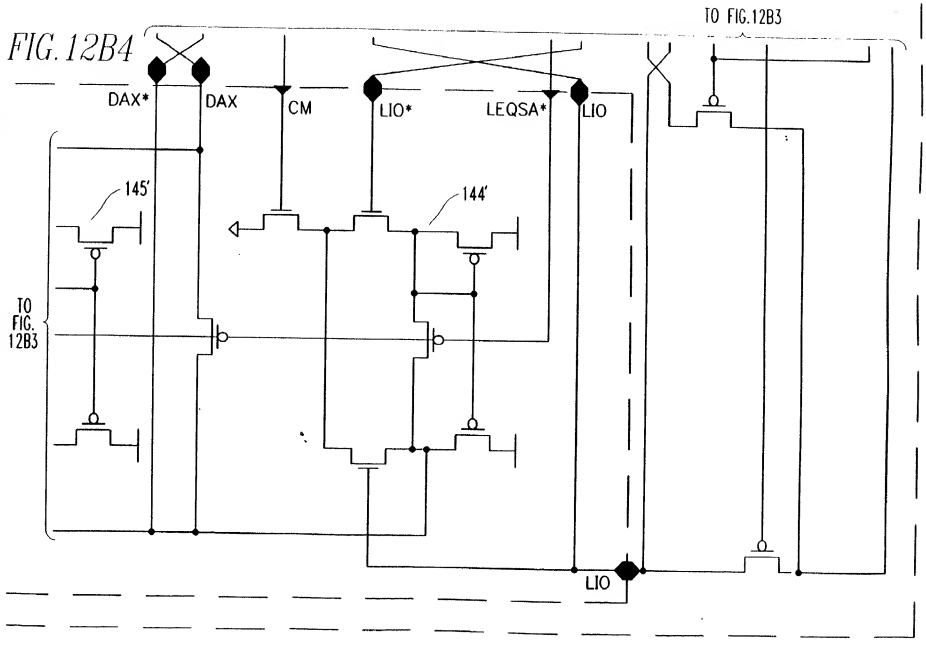

TO FIG.12B1
LEQSA*
LEQSA2T
LEQSA2*
LEQSA2
LTEST
LTEST*
LEQSA
CM
145'
DR
DR*
LEQSA*
TO FIG. 12B4
DAY
ENSA
DRT
DA*
DAY
dcsaOutput
dcsaHalf

FIG. 12B4



58,367

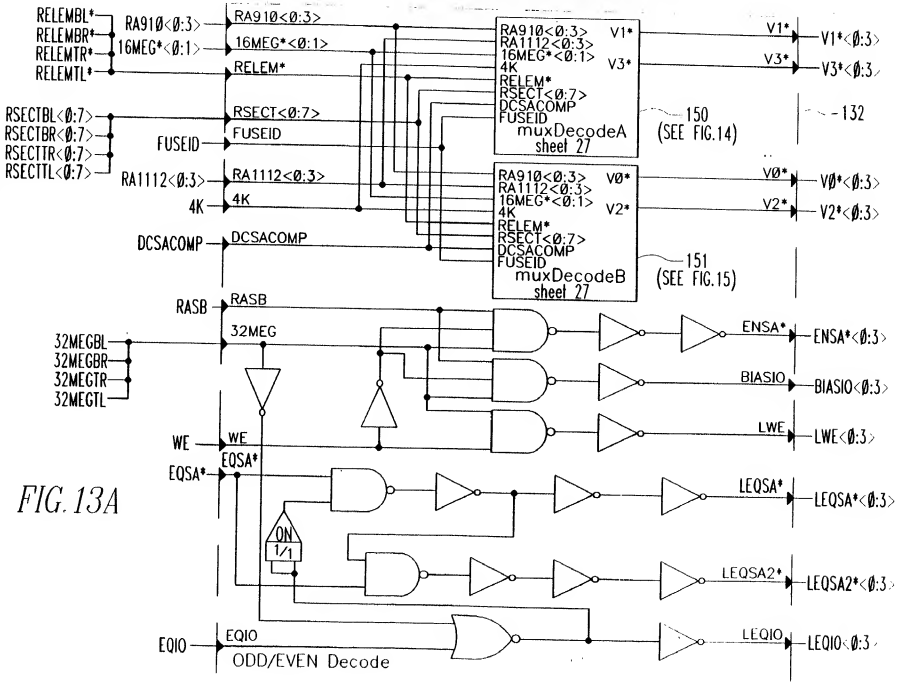

RELEMBL*
RELEMBR*
RELEMTR*
RELEMTL*
RA910<Ø:3>
16MEG*<Ø:1>
RA910<Ø:3>
16MEG*<Ø:1>
RELEM*
RSECTBL<Ø:7>
RSECTBR<Ø:7>
RSECTTR<Ø:7>
RSECTTL<Ø:7>
RSECT<Ø:7>
FUSEID
RA1112<Ø:3>
4K
RA1112<Ø:3>
4K
DCSACOMP
DCSACOMP
RASB
RASB
32MEGBL
32MEGBR
32MEGTR
32MEGTL
32MEG
WE
WE
EQSA*
EQSA*
ON
1/1
EQIO
EQIO
ODD/EVEN Decode
RA910<Ø:3>
RA1112<Ø:3>
16MEG*<Ø:1>
4K
RELEM*
RSECT<Ø:7>
DCSACOMP
FUSEID
V1*
V3*
muxDecodeA
sheet 27
150
(SEE FIG.14)
132
RA910<Ø:3>
RA1112<Ø:3>
16MEG*<Ø:1>
4K
RELEM*
RSECT<Ø:7>
DCSACOMP
FUSEID
VØ*
V2*
muxDecodeB
sheet 27
151
(SEE FIG.15)
V1*
V1*<Ø:3>
V3*
V3*<Ø:3>
VØ*
VØ*<Ø:3>
V2*
V2*<Ø:3>
ENSA*
ENSA*<Ø:3>
BIASIO
BIASIO<Ø:3>
LWE
LWE<Ø:3>
LEQSA*
LEQSA*<Ø:3>
LEQSA2*
LEQSA2*<Ø:3>
LEQIO
LEQIO<Ø:3>

FIG. 13A

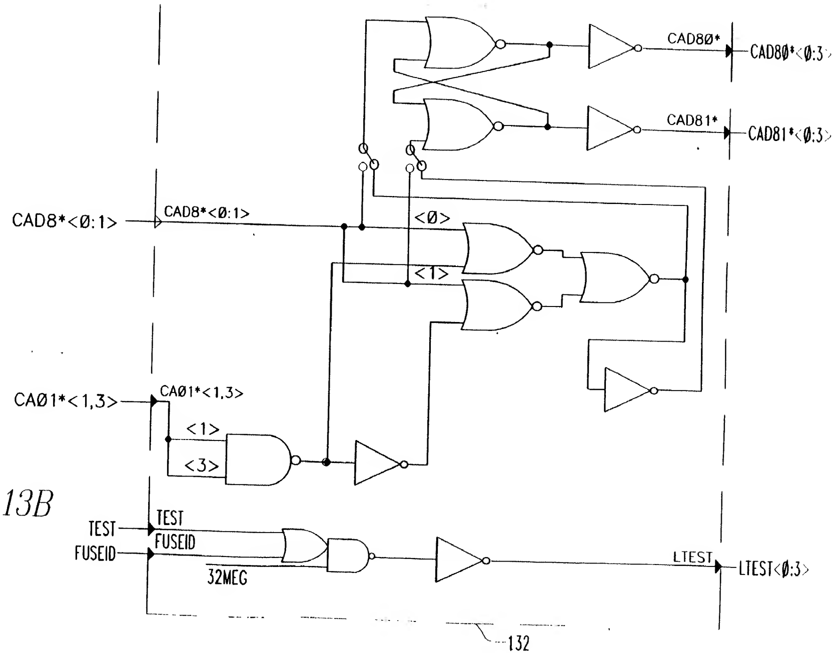

CAD8Ø*
CAD8Ø*<Ø:3>
CAD81*
CAD81*<Ø:3>
CAD8*<Ø:1>
CAD8*<Ø:1>
<Ø>
<1>
CAØ1*<1,3>
CAØ1*<1,3>
<1>
<3>
TEST
TEST
FUSEID
FUSEID
32MEG
LTEST
LTEST<Ø:3>
132

FIG. 13B

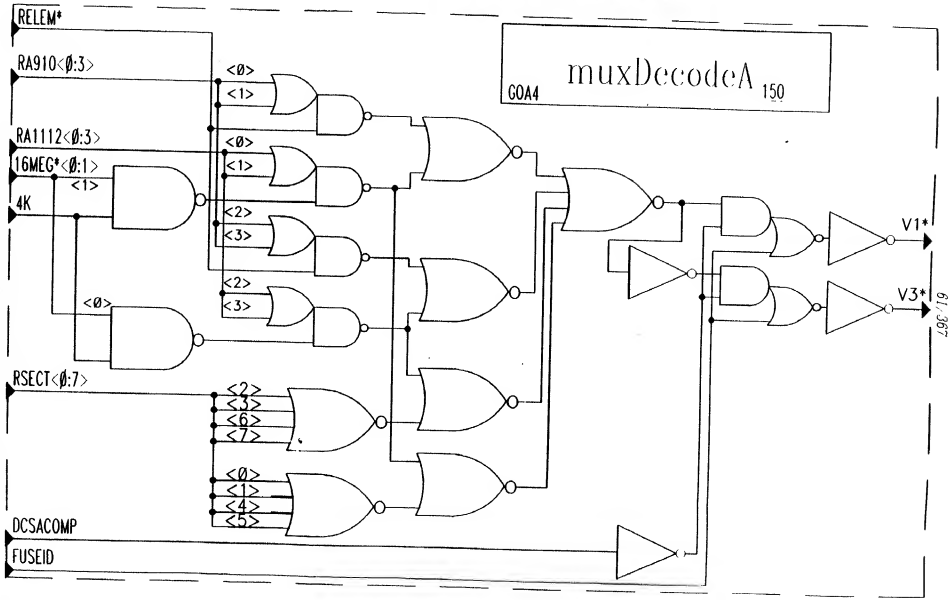

RELEM*
RA910<Ø:3>
RA1112<Ø:3>
16MEG*<Ø:1>
4K
RSECT<Ø:7>
DCSACOMP
FUSEID
muxDecodeA 150
GOA4
V1*
V3*
61,367

FIG 11

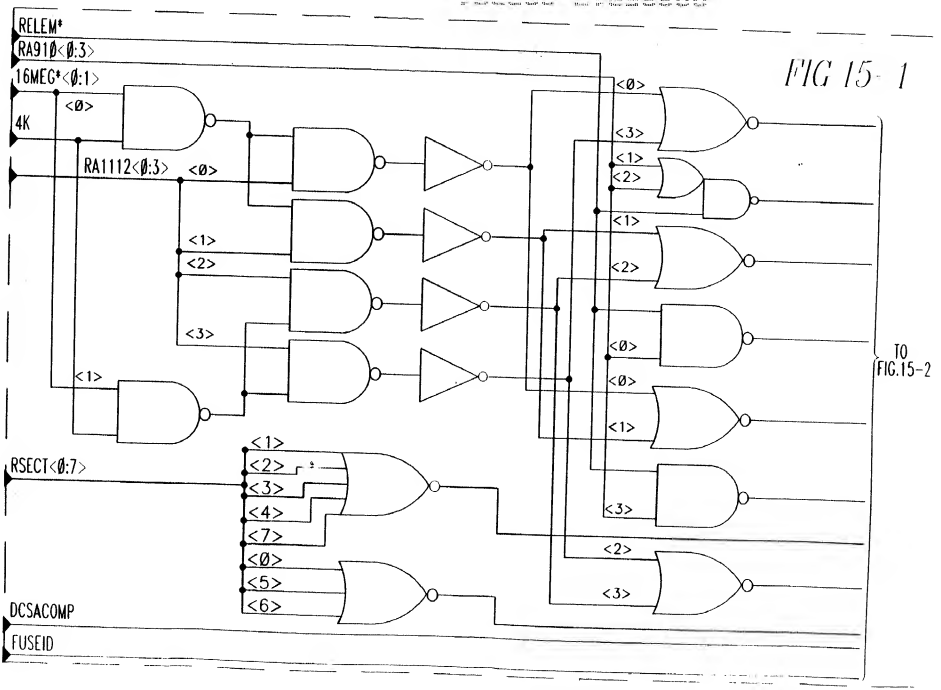


FIG 15-1

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FIG. 15-2

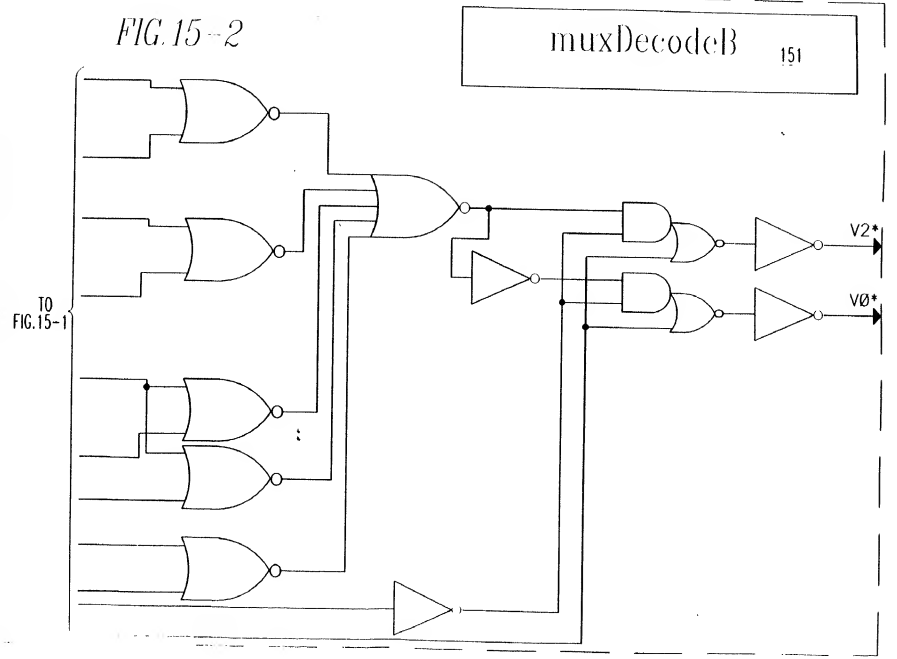
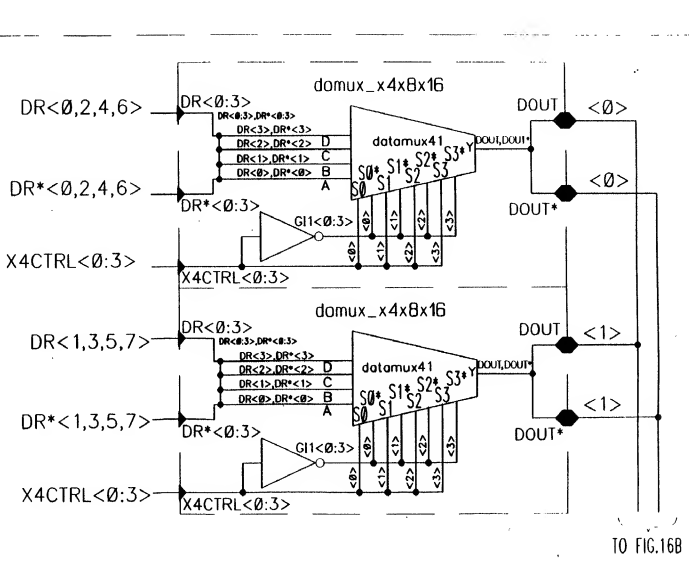


FIG. 16A


108
domux_x4x8x16
DR<Ø,2,4,6>
DR<Ø:3>
DR<Ø:3>,DR*<Ø:3>
DR<3>,DR*<3>
DR<2>,DR*<2>
DR<1>,DR*<1>
DR<Ø>,DR*<Ø>
D
C
B
A
datamux41
DOUT,DOUT*
S0*
S1*
S2*
S3*
S0
S1
S2
S3
DOUT
<Ø>
DOUT*
DR*<Ø,2,4,6>
DR*<Ø:3>
GI1<Ø:3>
X4CTRL<Ø:3>
domux_x4x8x16
DR<1,3,5,7>
DR*<1,3,5,7>
<1>
TO FIG.16B

LDQ<n>	Read Data X16	X8	X4
0	0	0,2	0,2,4,6
1	1	1,3	1,3,5,7
2	2		
3	3		
4	4		
5	5		
6	6	4,6	
7	7	5,7	

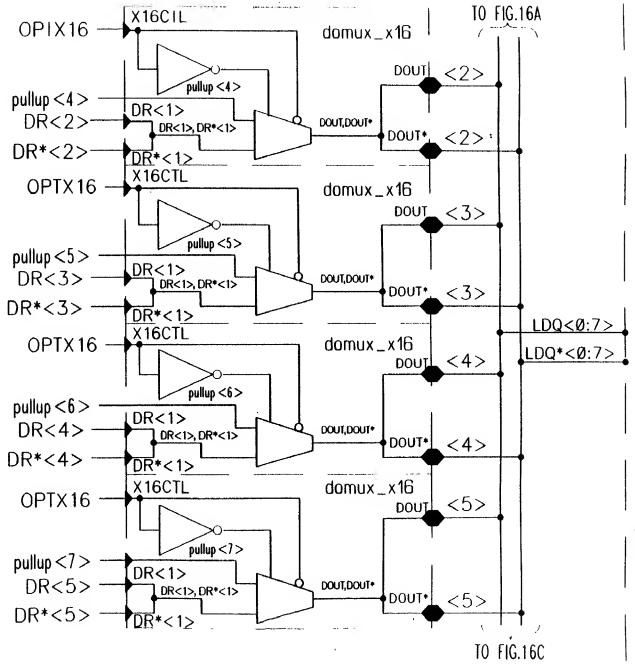


FIG. 16B

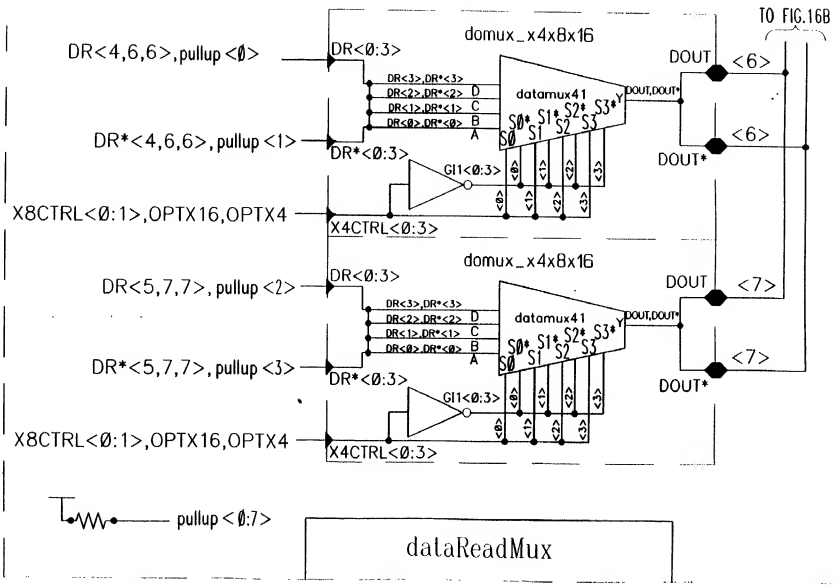

TO FIG.16B
domux_x4x8x16
DR<4,6,6>,pullup<Ø>
DR<Ø:3>
DR<3>,DR*<3>
DR<2>,DR*<2>
DR<1>,DR*<1>
DR<Ø>,DR*<Ø>
D
C
B
A
datamux41
DOUT,DOUT*
DOUT
<6>
DR*<4,6,6>,pullup<1>
DR*<Ø:3>
GI1<Ø:3>
DOUT*
X8CTRL<Ø:1>,OPTX16,OPTX4
X4CTRL<Ø:3>
domux_x4x8x16
DR<5,7,7>,pullup<2>
<7>
DR*<5,7,7>,pullup<3>
pullup<Ø:7>
dataReadMux

FIG. 16C

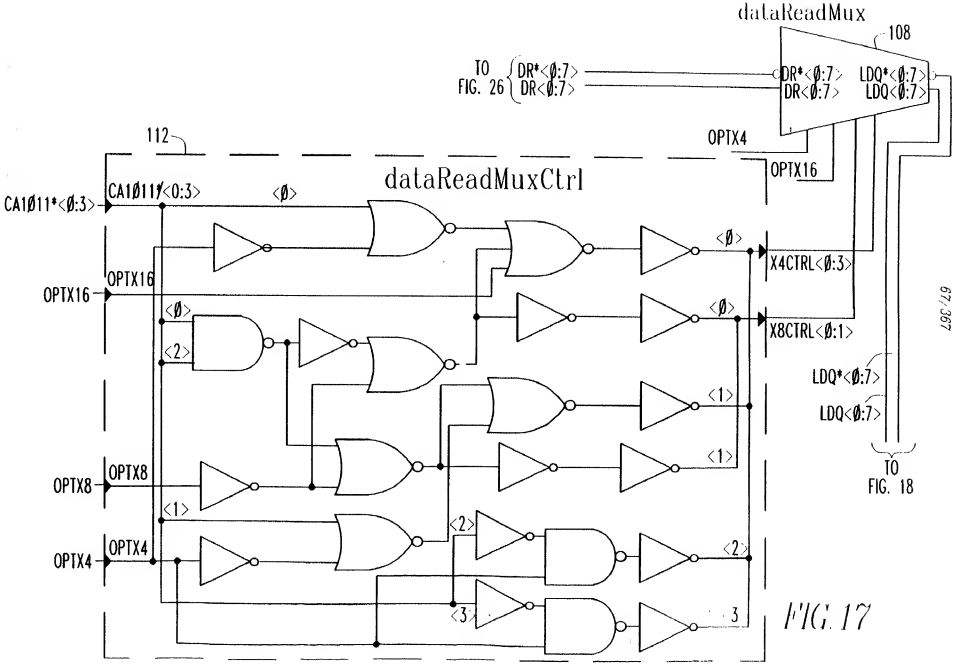

dataReadMux
108
TO FIG. 26
DR*<Ø:7>
DR<Ø:7>
LDQ*<Ø:7>
LDQ<Ø:7>
112
OPTX4
OPTX16
dataReadMuxCtrl
CA1Ø11*<Ø:3>
CA1Ø111<0:3>
<Ø>
X4CTRL<Ø:3>
X8CTRL<Ø:1>
<1>
<2>
<3>
OPTX8
TO FIG. 18

FIG. 17

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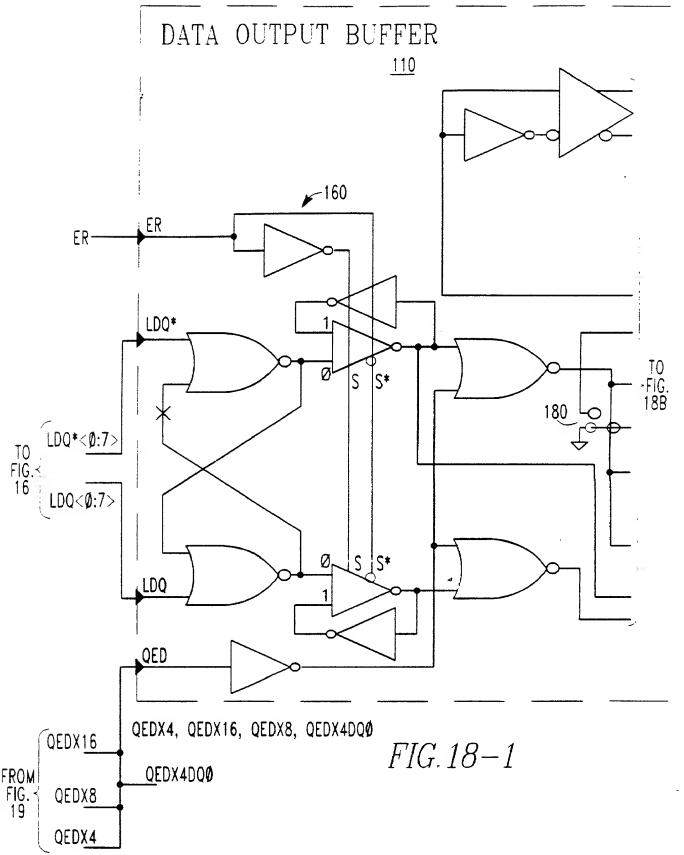
DATA OUTPUT BUFFER
110
160
ER
ER
LDQ*
1
Ø
S
S*
TO
FIG.
18B
180
TO
FIG.
16
LDQ*<Ø:7>
LDQ<Ø:7>
Ø
S
S*
LDQ
1
QED
QEDX4, QEDX16, QEDX8, QEDX4DQØ
QEDX16
QEDX4DQØ
FROM
FIG.
19
QEDX8
QEDX4

FIG. 18-1

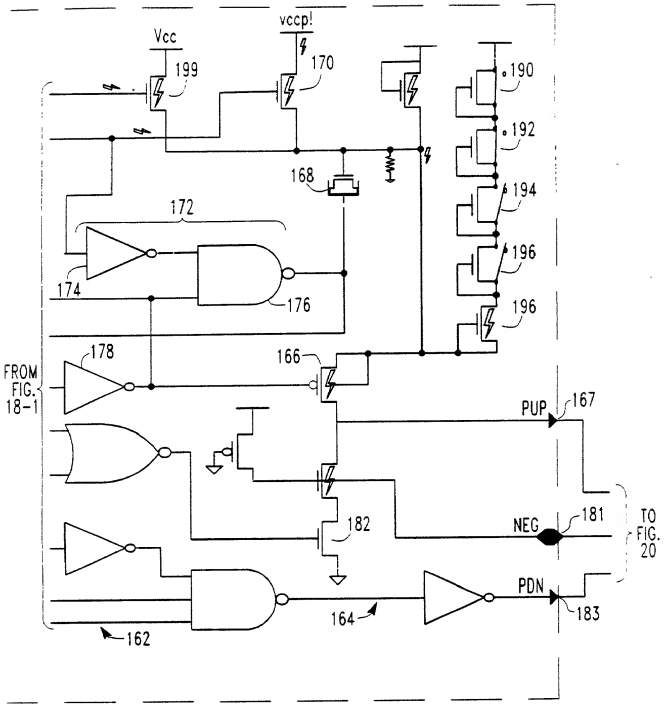
Vcc
vccp!
199
170
190
192
194
196
196
168
172
174
176
178
166
FROM FIG. 18-1
PUP
167
182
NEG
181
TO FIG. 20
PDN
183
164
162

FIG. 18-2

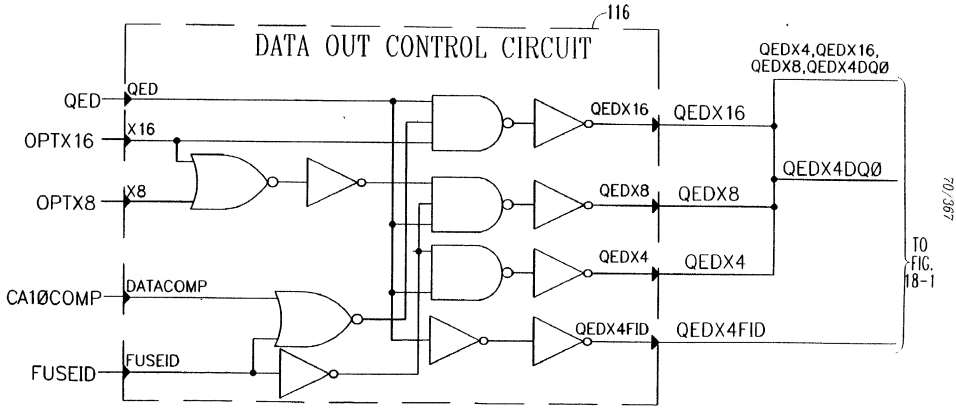
116
DATA OUT CONTROL CIRCUIT
QED
OPTX16
OPTX8
CA1ØCOMP
FUSEID
QED
X16
X8
DATACOMP
FUSEID
QEDX16
QEDX8
QEDX4
QEDX4FID
QEDX16
QEDX8
QEDX4
QEDX4FID
QEDX4,QEDX16,
QEDX8,QEDX4DQØ
QEDX4DQØ
TO
FIG.
18-1

FIG. 19

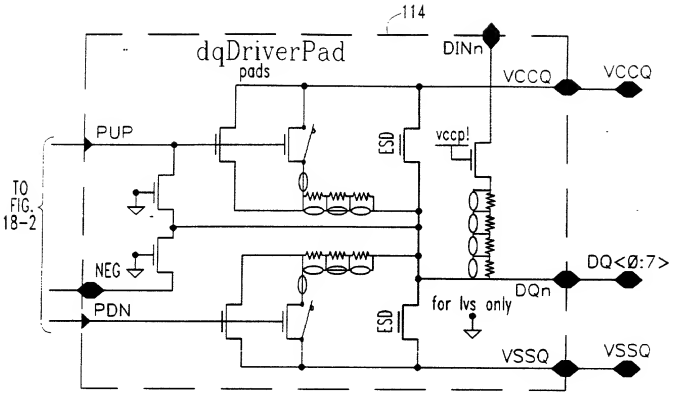
114
dqDriverPad
pads
DINn
VCCQ
VCCQ
PUP
ESD
vccp!
TO
FIG.
18-2
NEG
DQ<Ø:7>
DQn
for lvs only
PDN
ESD
VSSQ
VSSQ

FIG. 20

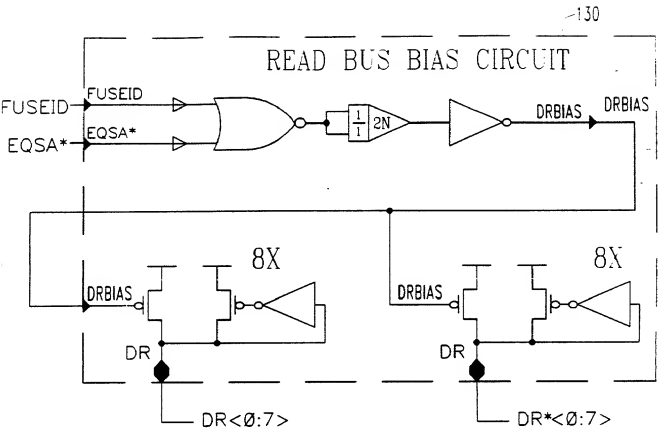
130
READ BUS BIAS CIRCUIT
FUSEID
FUSEID
EQSA*
EQSA*
1
1
2N
DRBIAS
DRBIAS
8X
8X
DRBIAS
DRBIAS
DR
DR
DR<Ø:7>
DR*<Ø:7>

FIG. 21

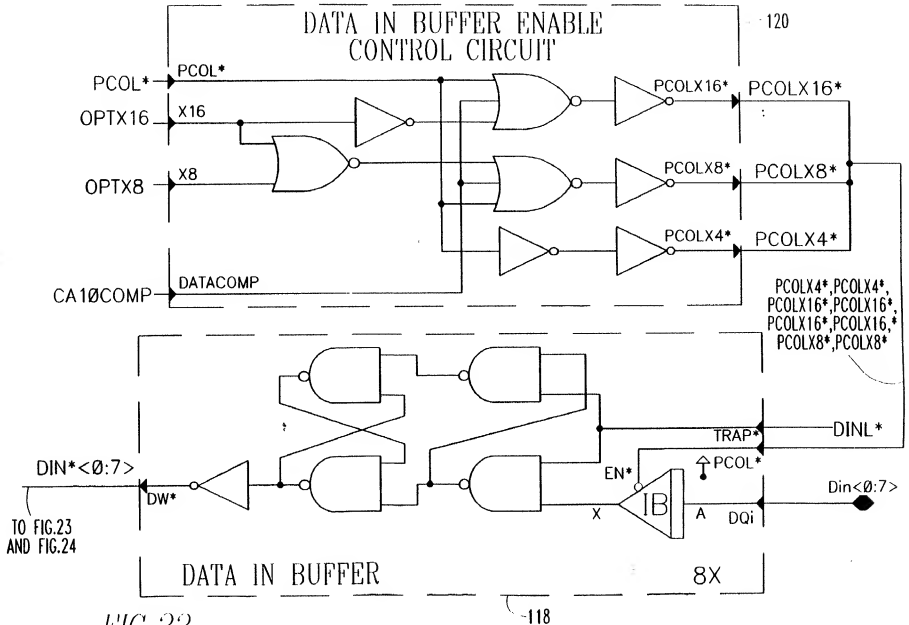
DATA IN BUFFER ENABLE
CONTROL CIRCUIT
120
PCOL*
PCOL*
OPTX16
X16
OPTX8
X8
PCOLX16*
PCOLX16*
PCOLX8*
PCOLX8*
PCOLX4*
PCOLX4*
CA1ØCOMP
DATACOMP
PCOLX4*,PCOLX4*,
PCOLX16*,PCOLX16*,
PCOLX16*,PCOLX16,*
PCOLX8*,PCOLX8*
TRAP*
DINL*
DIN*<Ø:7>
DW*
EN*
PCOL*
IB
X
A
DQi
Din<Ø:7>
TO FIG.23
AND FIG.24
DATA IN BUFFER
8X
118

FIG. 22

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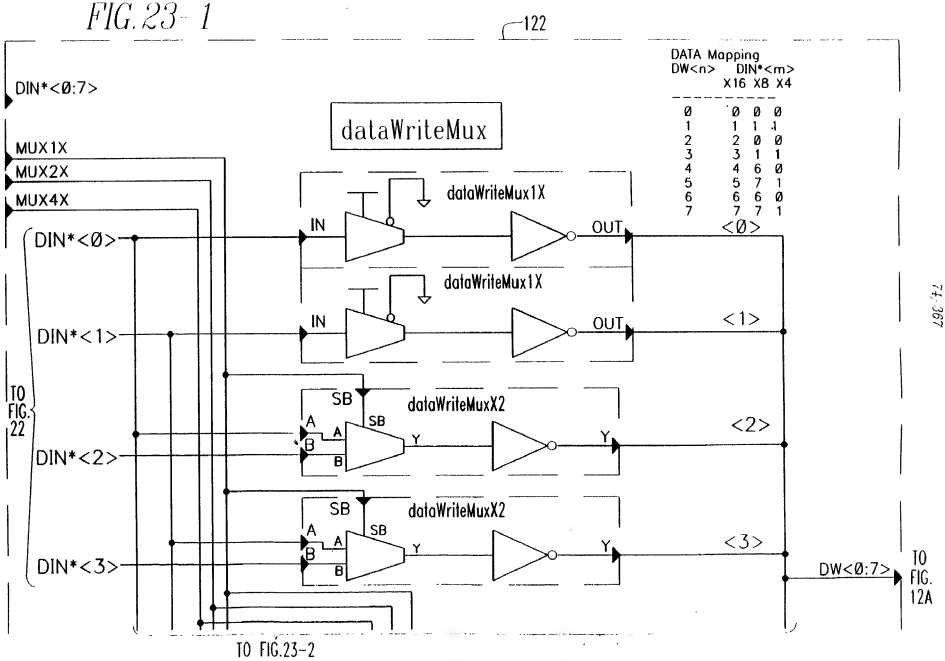
FIG. 23-1



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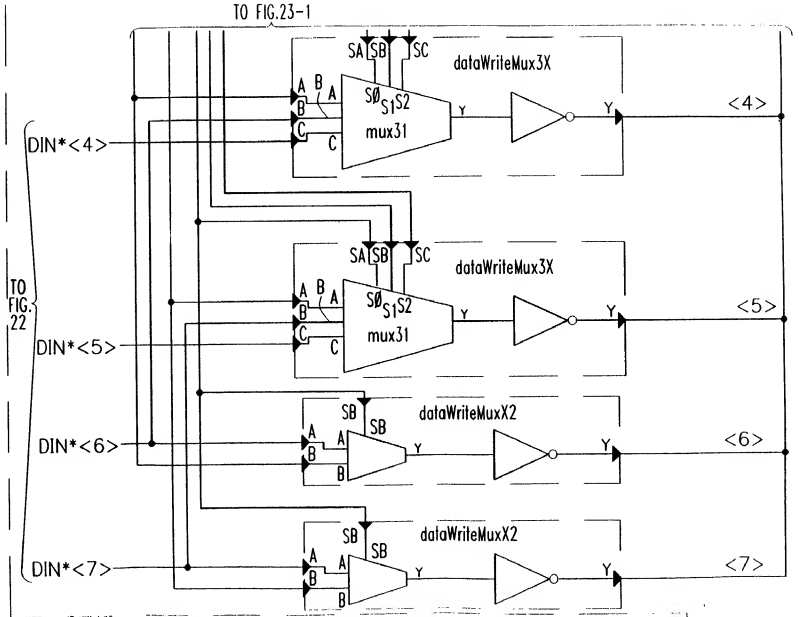

FIG. 23-2

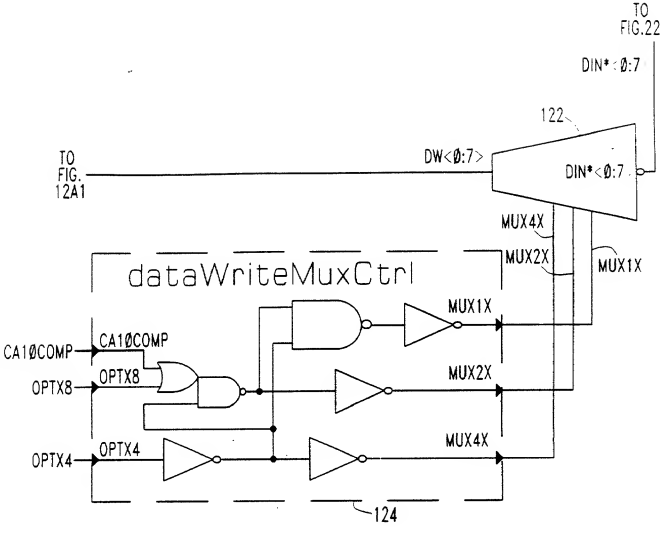
TO
FIG.22
DIN*<Ø:7>
122
TO
FIG.
12A1
DW<Ø:7>
DIN*<Ø:7>
MUX4X
MUX2X
MUX1X
dataWriteMuxCtrl
MUX1X
CA1ØCOMP
CA1ØCOMP
OPTX8
OPTX8
MUX2X
OPTX4
OPTX4
MUX4X
124

FIG. 24

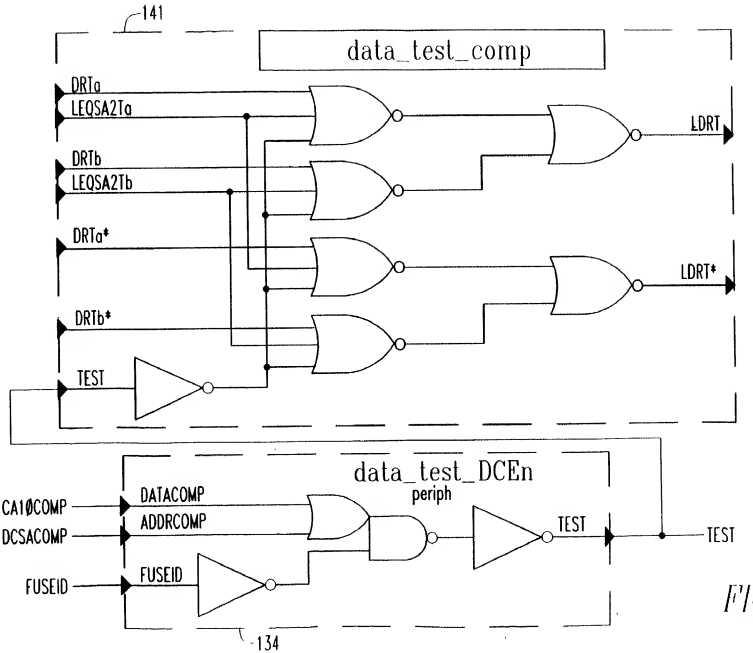
141
data_test_comp
DRTa
LEQSA2Ta
DRTb
LEQSA2Tb
DRTa*
DRTb*
TEST
LDRT
LDRT*
data_test_DCEn
periph
CA1ØCOMP
DCSACOMP
FUSEID
DATACOMP
ADDRCOMP
FUSEID
TEST
TEST
134

FIG.25

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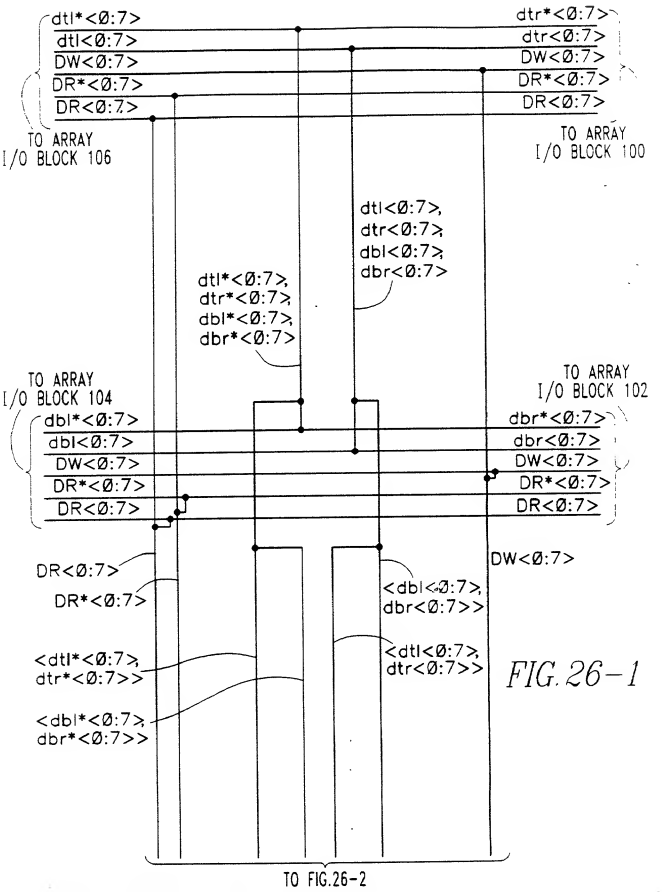

dtl*<Ø:7>
dtl<Ø:7>
DW<Ø:7>
DR*<Ø:7>
DR<Ø:7>
TO ARRAY I/O BLOCK 106
dtr*<Ø:7>
dtr<Ø:7>
DW<Ø:7>
DR*<Ø:7>
DR<Ø:7>
TO ARRAY I/O BLOCK 100
dtl<Ø:7>, dtr<Ø:7>, dbl<Ø:7>, dbr<Ø:7>
dtl*<Ø:7>, dtr*<Ø:7>, dbl*<Ø:7>, dbr*<Ø:7>
TO ARRAY I/O BLOCK 104
dbl*<Ø:7>
dbl<Ø:7>
DW<Ø:7>
DR*<Ø:7>
DR<Ø:7>
TO ARRAY I/O BLOCK 102
dbr*<Ø:7>
dbr<Ø:7>
DW<Ø:7>
DR*<Ø:7>
DR<Ø:7>
DR<Ø:7>
DR*<Ø:7>
DW<Ø:7>
<dbl<Ø:7>, dbr<Ø:7>>
<dtl*<Ø:7>, dtr*<Ø:7>>
<dtl<Ø:7>, dtr<Ø:7>>
<dbl*<Ø:7>, dbr*<Ø:7>>
TO FIG.26-2

FIG. 26-1

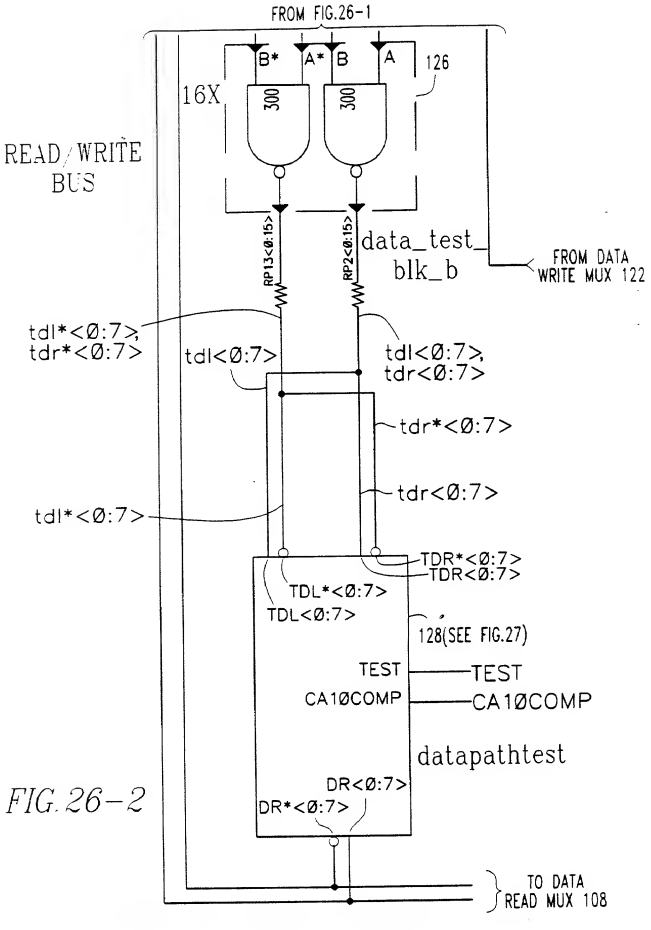

FROM FIG.26-1
B*
A*
B
A
126
16X
300
300
READ/WRITE BUS
RP13<0:15>
RP2<0:15>
data_test_blk_b
FROM DATA WRITE MUX 122
tdl*<0:7>, tdr*<0:7>
tdl<0:7>
tdl<0:7>, tdr<0:7>
tdr*<0:7>
tdr<0:7>
tdl*<0:7>
TDR*<0:7>
TDR<0:7>
TDL*<0:7>
TDL<0:7>
128(SEE FIG.27)
TEST
TEST
CA10COMP
CA10COMP
datapathtest
DR<0:7>
DR*<0:7>
TO DATA READ MUX 108

FIG. 26-2

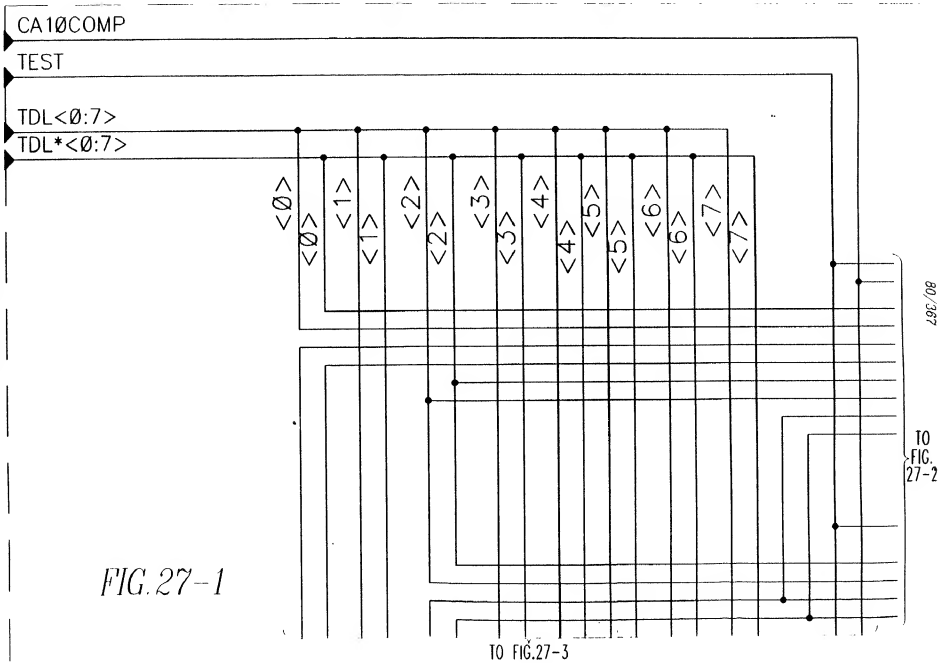
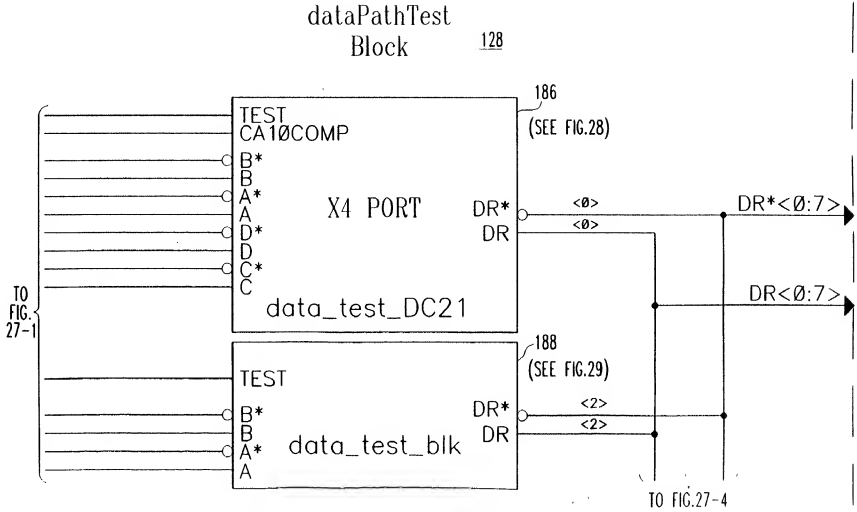

CA10COMP
TEST
TDL<0:7>
TDL*<0:7>
<0>
<0>
<1>
<1>
<2>
<2>
<3>
<3>
<4>
<4>
<5>
<5>
<6>
<6>
<7>
<7>
TO FIG. 27-2
TO FIG.27-3

FIG. 27-1

FIG. 27-2



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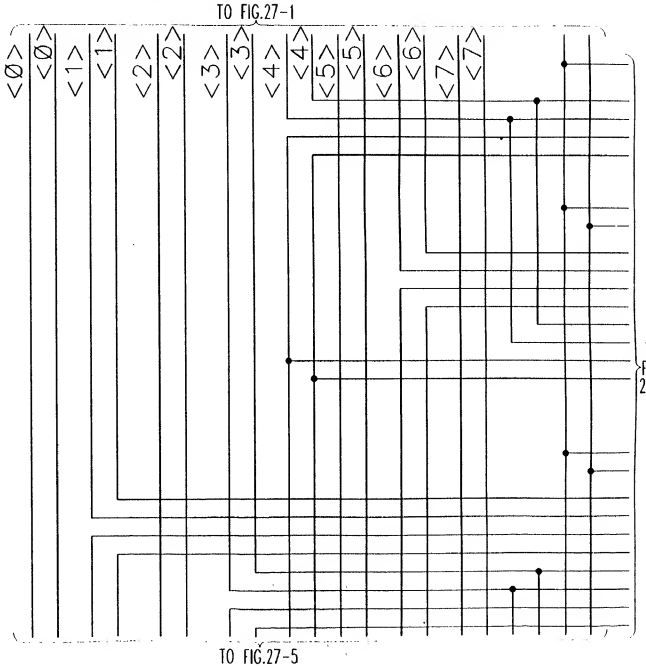


FIG. 27-3

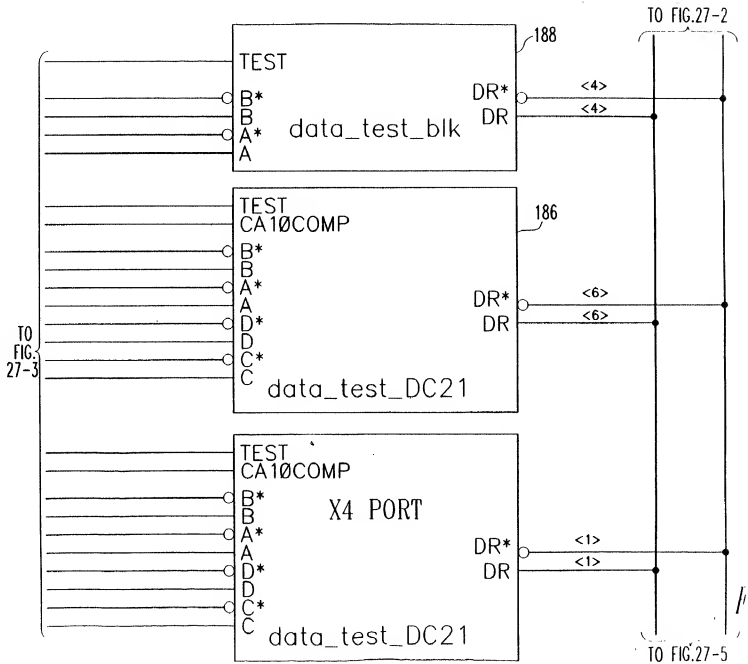
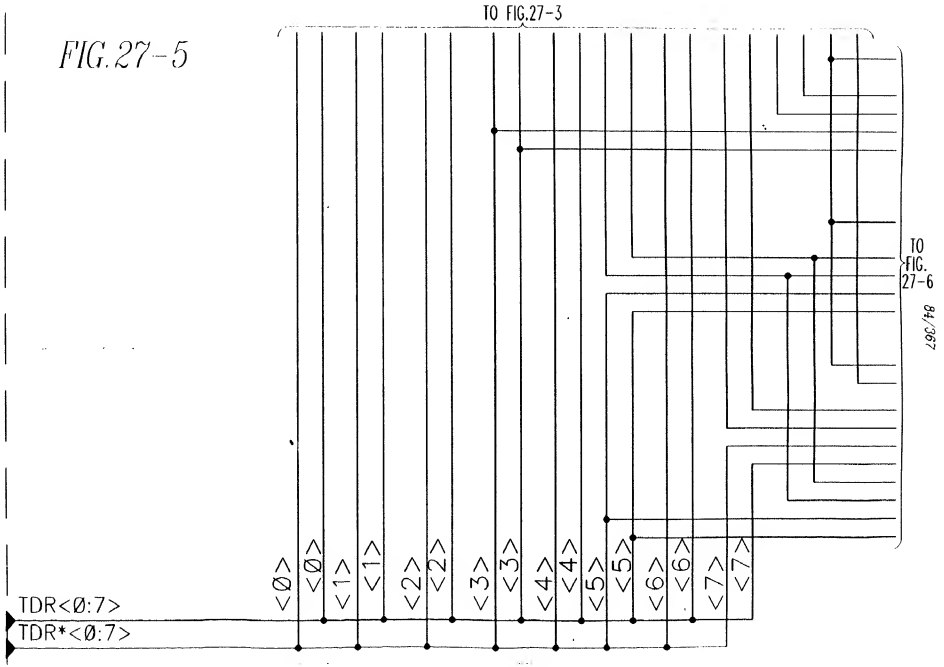

TO FIG.27-2
188
TEST
B*
B
A*
A
data_test_blk
DR*
DR
<4>
<4>
TEST
CA1ØCOMP
186
B*
B
A*
A
D*
D
C*
C
data_test_DC21
DR*
DR
<6>
<6>
TO FIG. 27-3
TEST
CA1ØCOMP
B*
B
A*
A
D*
D
C*
C
X4 PORT
data_test_DC21
DR*
DR
<1>
<1>
TO FIG.27-5

FIG.27-4

FIG. 27-5



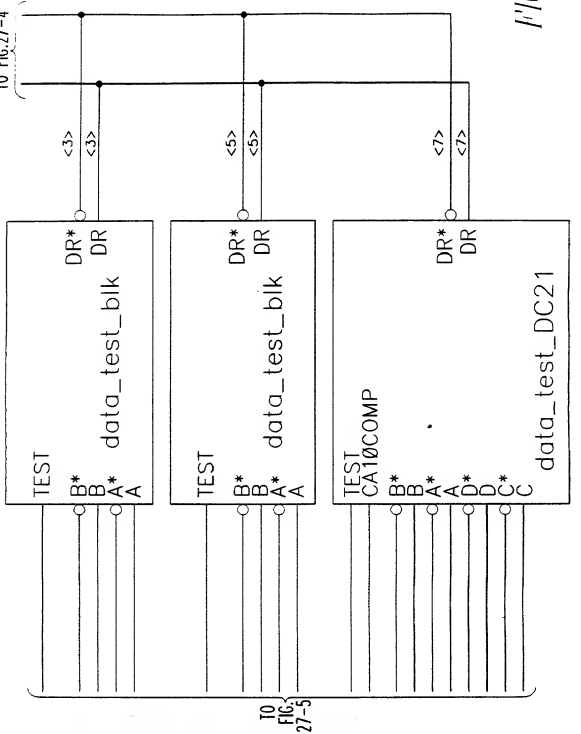

TO FIG.27-4
<3>
<3>
<5>
<5>
<7>
<7>
TEST
B*
B
A*
A
DR*
DR
data_test_blk
TEST
B*
B
A*
A
DR*
DR
data_test_blk
TEST
CA10COMP
B*
B
A*
A
D*
D
C*
C
DR*
DR
data_test_DC21
TO FIG. 27-5

FIG. 27-6

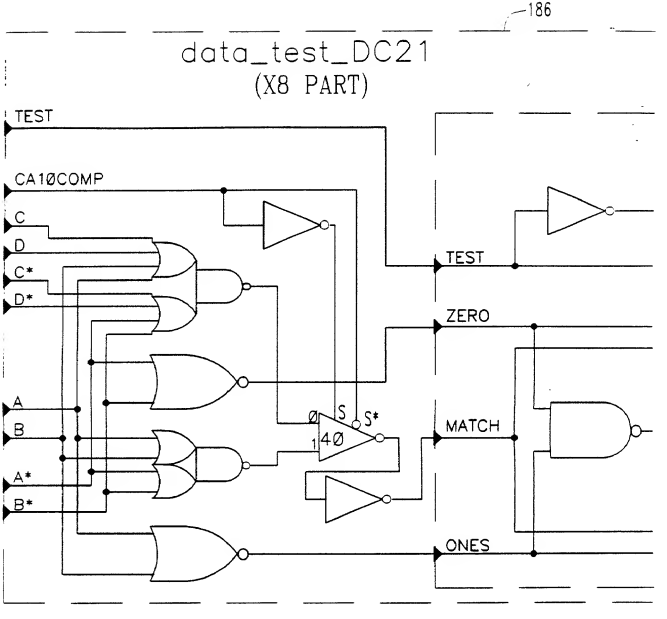

186
data_test_DC21
(X8 PART)
TEST
CA1ØCOMP
C
D
C*
D*
A
B
A*
B*
Ø
S
S*
14Ø
TEST
ZERO
MATCH
ONES

FIG. 28-1

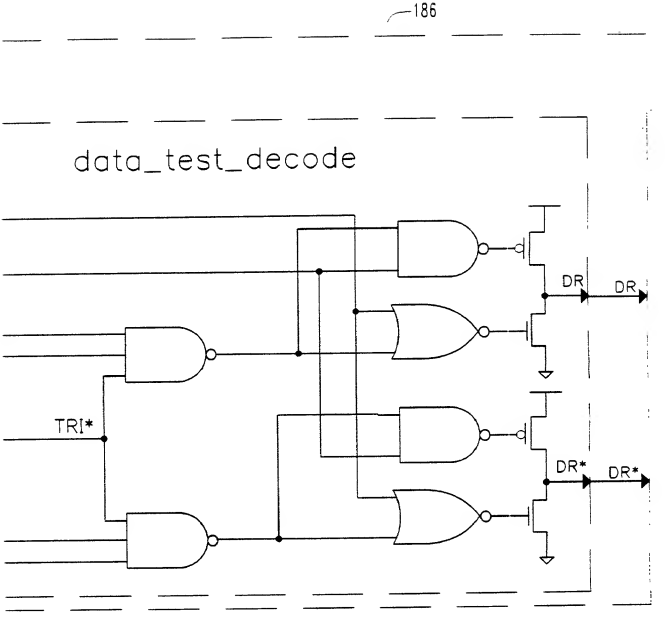


FIG. 28-2

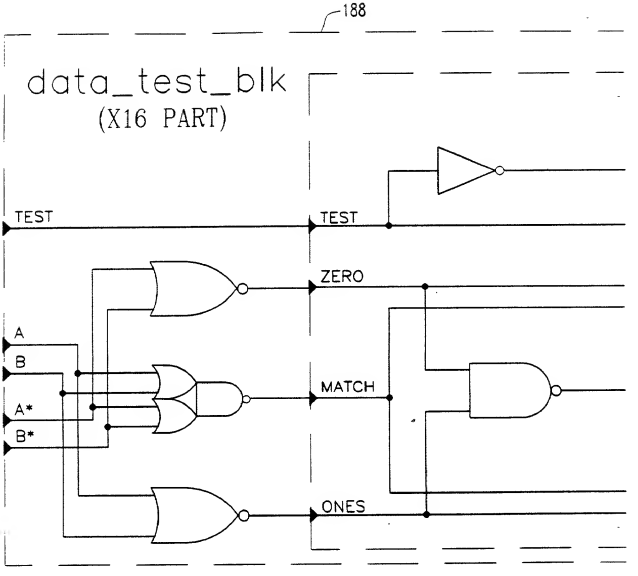


FIG. 29–1

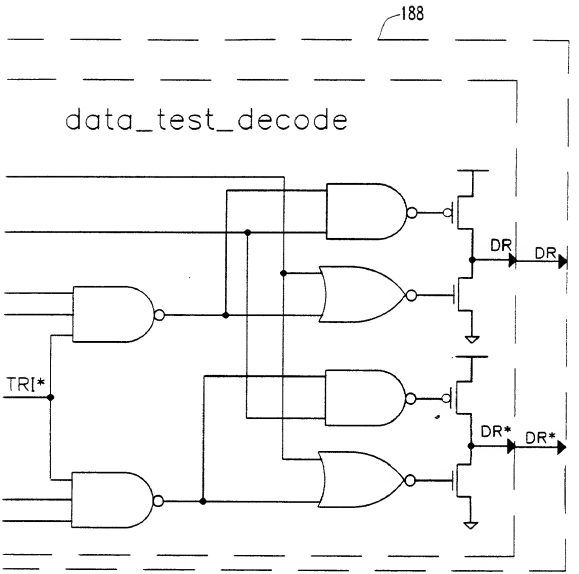


FIG. 29-2

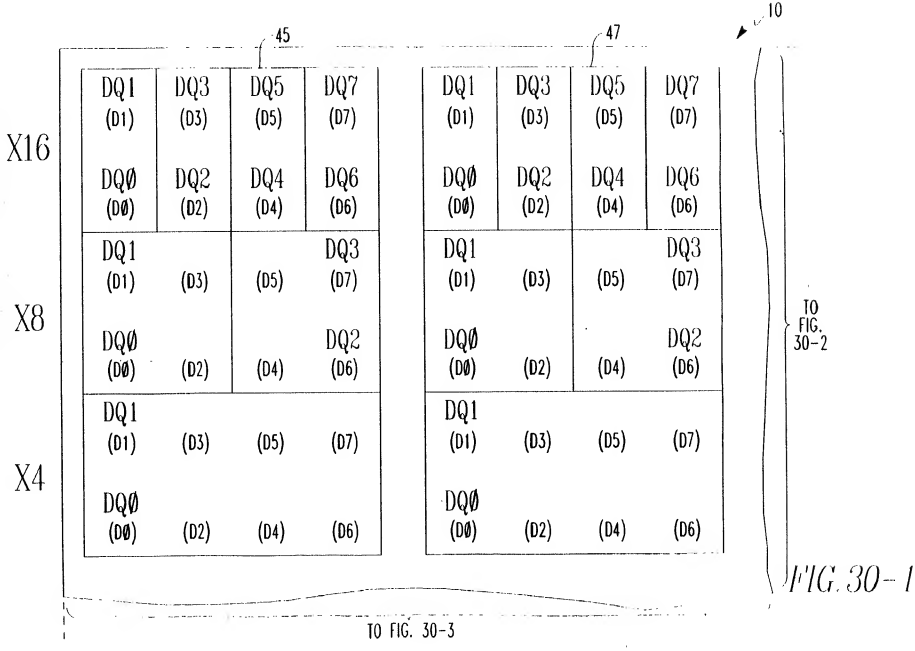


FIG. 30-1

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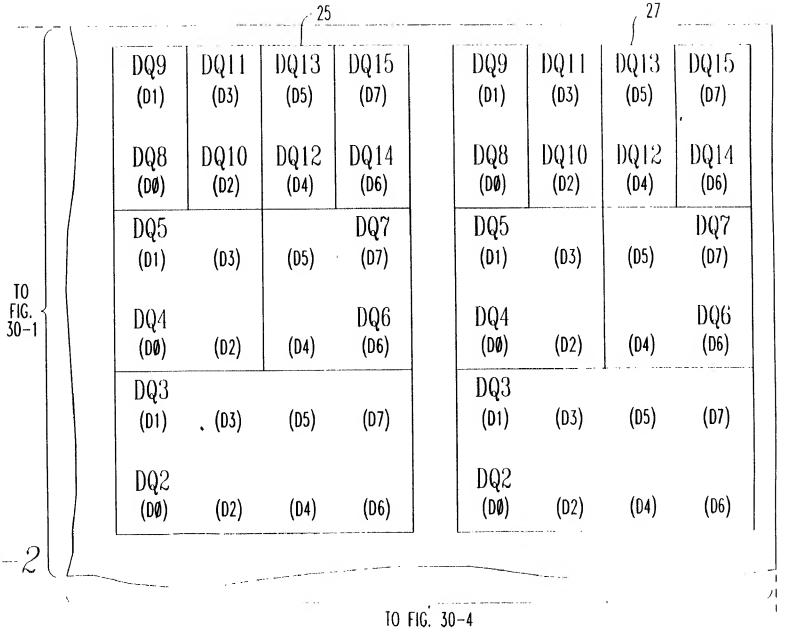

FIG. 30-2

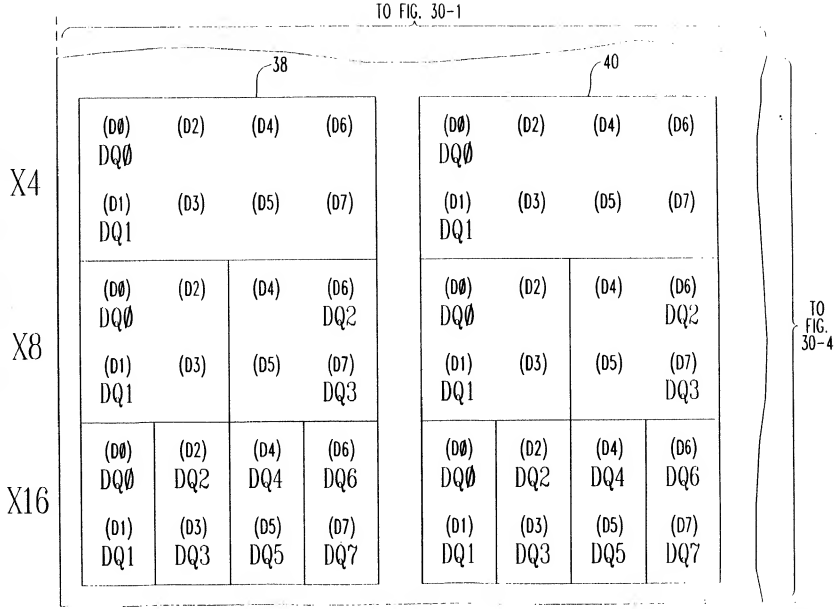

FIG. 30-3

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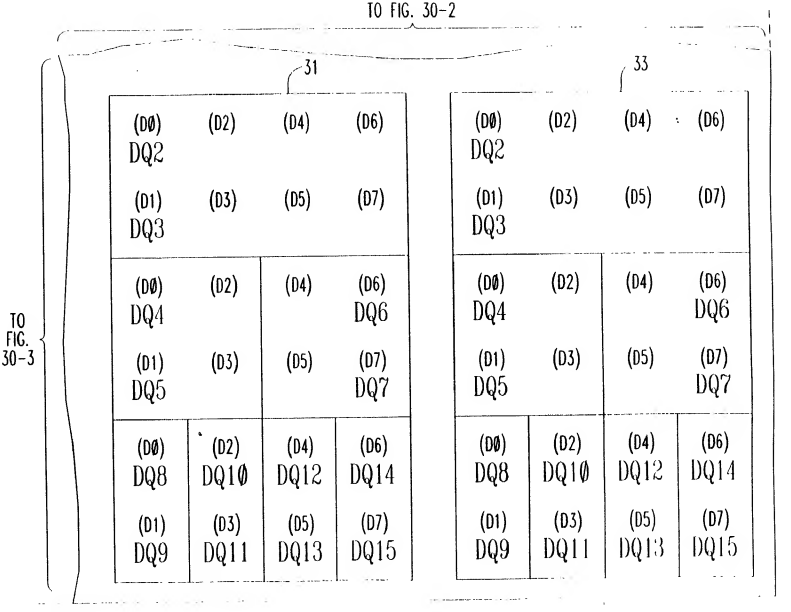


FIG 30-1

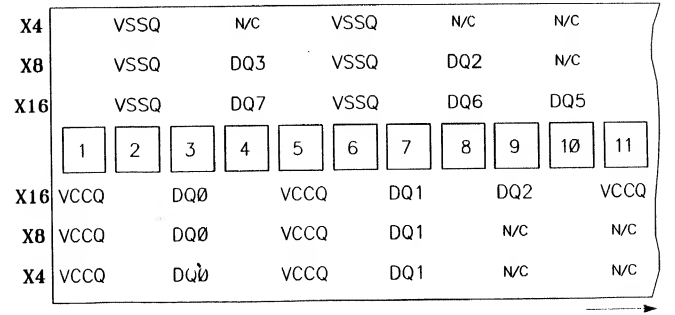


FIG. 31A1

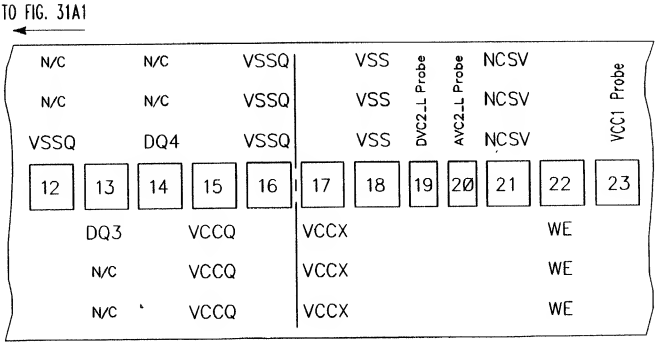

TO FIG. 31A1
N/C
N/C
VSSQ
N/C
N/C
DQ4
VSSQ
VSSQ
VSSQ
VSS
VSS
VSS
DVC2_L Probe
AVC2_L Probe
NCSV
NCSV
NCSV
VCC1 Probe
12
13
14
15
16
17
18
19
20
21
22
23
DQ3
N/C
N/C
VCCQ
VCCQ
VCCQ
VCCX
VCCX
VCCX
WE
WE
WE

FIG. 31A2

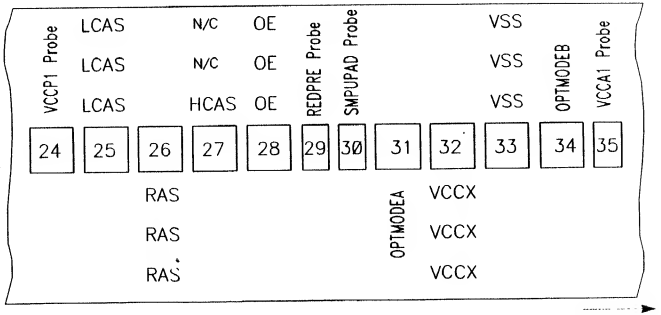


FIG. 31B1

TO FIG. 31B1

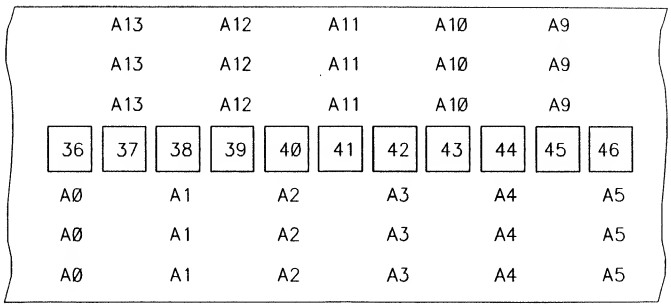


FIG. 31B2

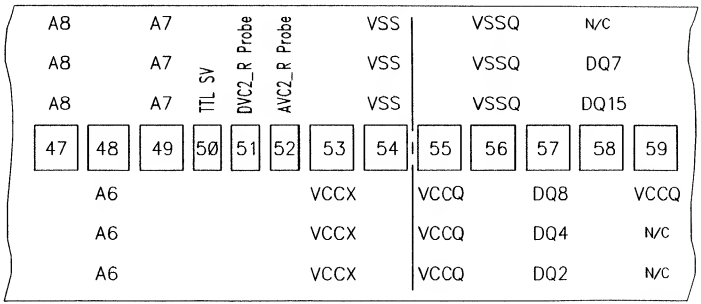


FIG. 31C1

TO FIG. 31C1

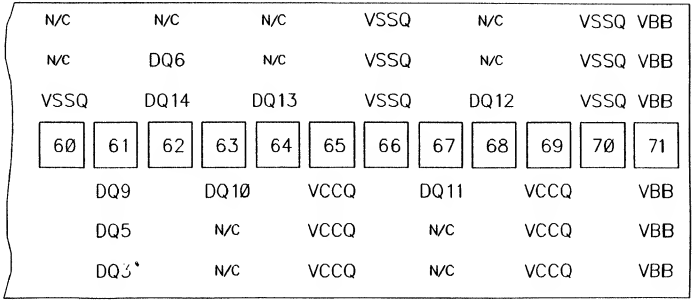


FIG. 31C2

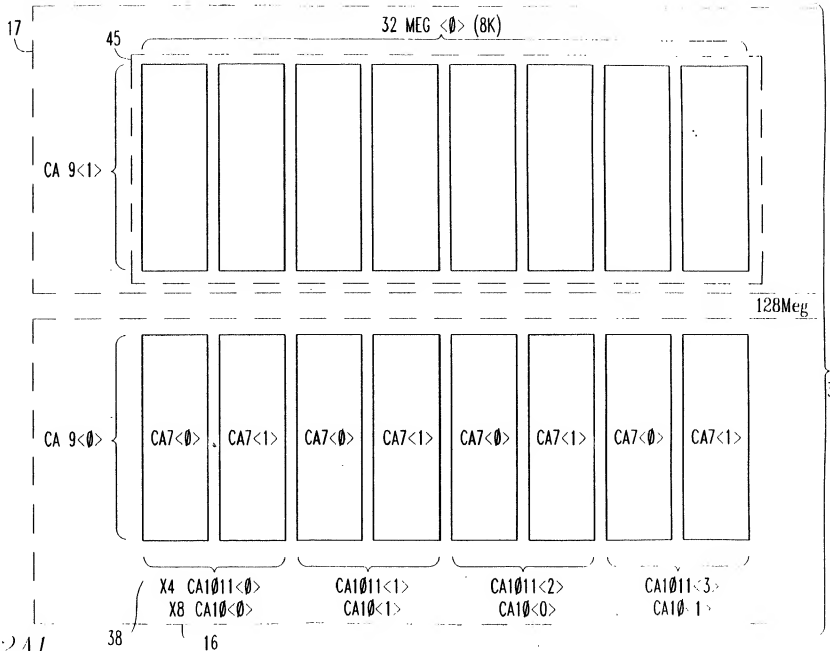
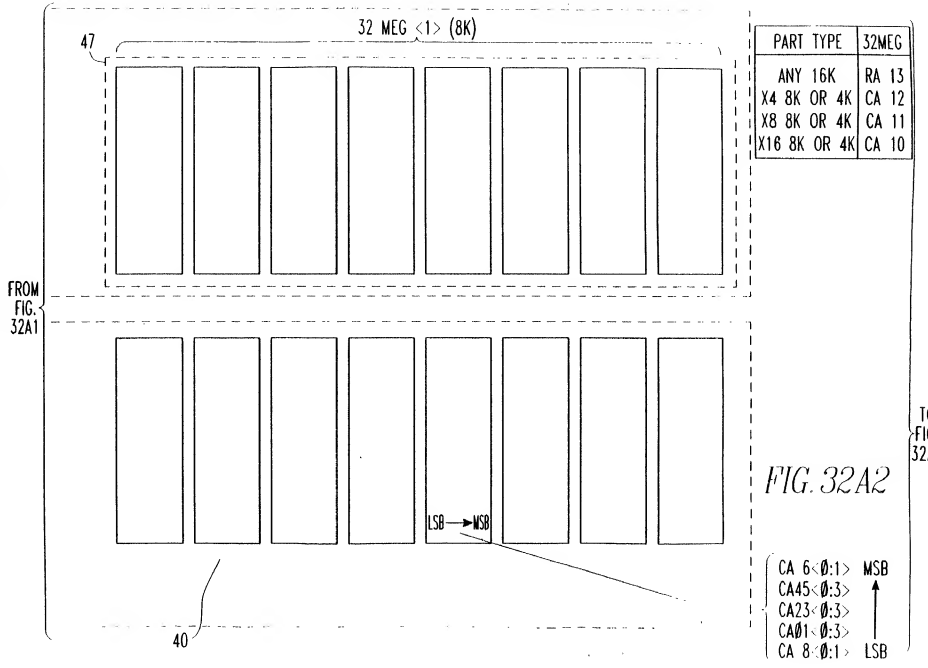


FIG. 32A1



PART TYPE	32MEG
ANY 16K	RA 13
X4 8K OR 4K	CA 12
X8 8K OR 4K	CA 11
X16 8K OR 4K	CA 10

FIG. 32A2

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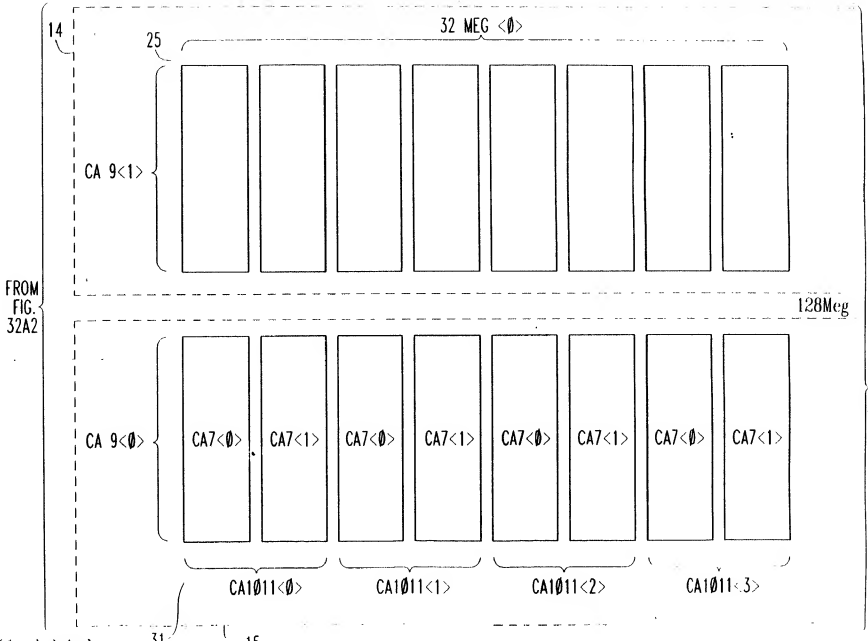
14
25
32 MEG <Ø>
CA 9<1>
FROM FIG. 32A2
128Meg
CA 9<Ø>
CA7<Ø>
CA7<1>
CA7<Ø>
CA7<1>
CA7<Ø>
CA7<1>
CA7<Ø>
CA7<1>
CA1Ø11<Ø>
CA1Ø11<1>
CA1Ø11<2>
CA1Ø11<3>
31
15
TO FIG. 32A4
102,367

FIG 32A3

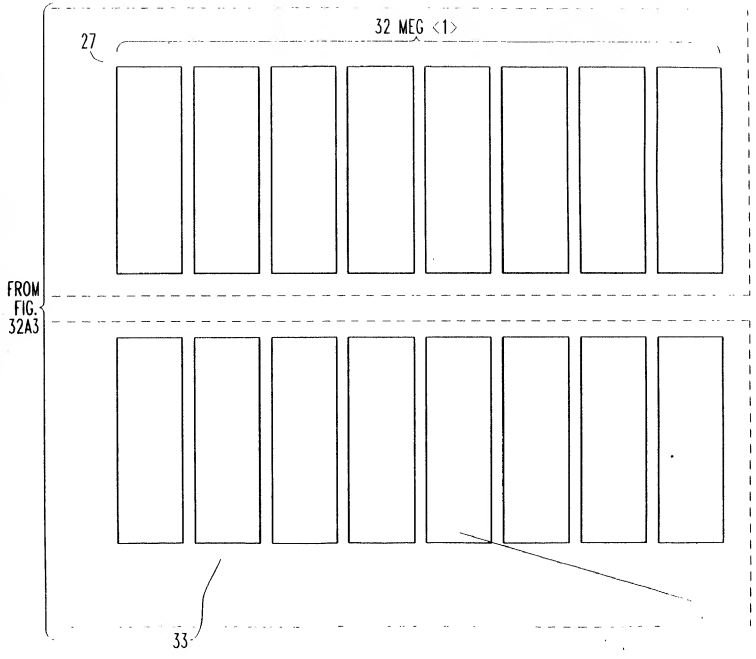
32 MEG <1>
27
FROM FIG. 32A3
33
CA 6<Ø:1> MSB
CA45<Ø:3>
CA23<Ø:3>
CAØ1<Ø:3>
CA 8 Ø:1> LSB

FIG. 32A4

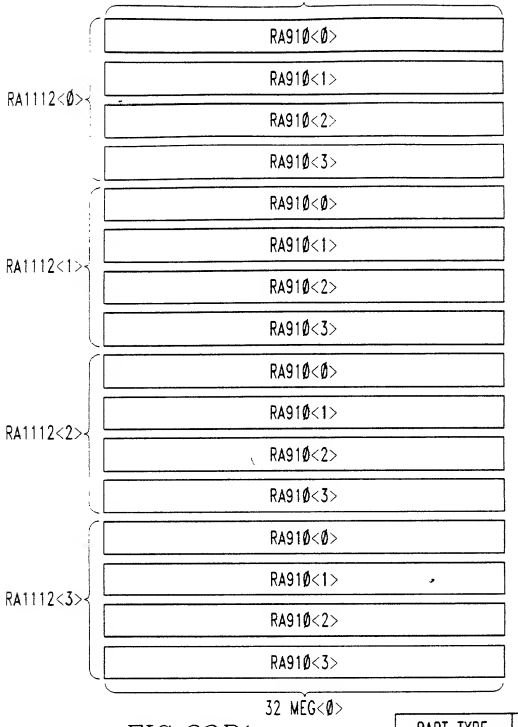

FIG. 32B1

PART TYPE	32MEG
ANY 16K	RA_13
X4 8K OR 4K	CA_12
X8 8K OR 4K	CA_11
X16 8K OR 4K	CA_10

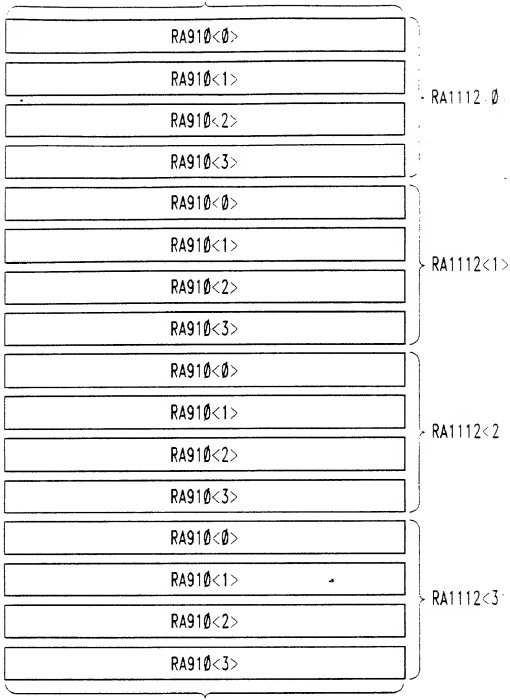
RA910<0>
RA910<1>
RA910<2>
RA910<3>
RA1112.0
RA910<0>
RA910<1>
RA910<2>
RA910<3>
RA1112<1>
RA910<0>
RA910<1>
RA910<2>
RA910<3>
RA1112<2
RA910<0>
RA910<1>
RA910<2>
RA910<3>
RA1112<3
32 MEG<1>

FIG. 32B2

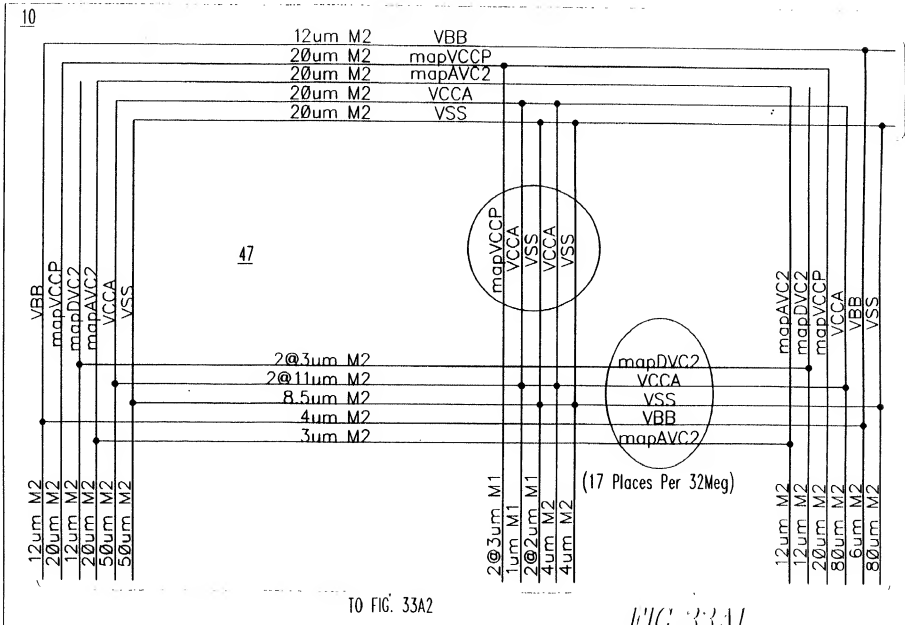

FIG 33A1

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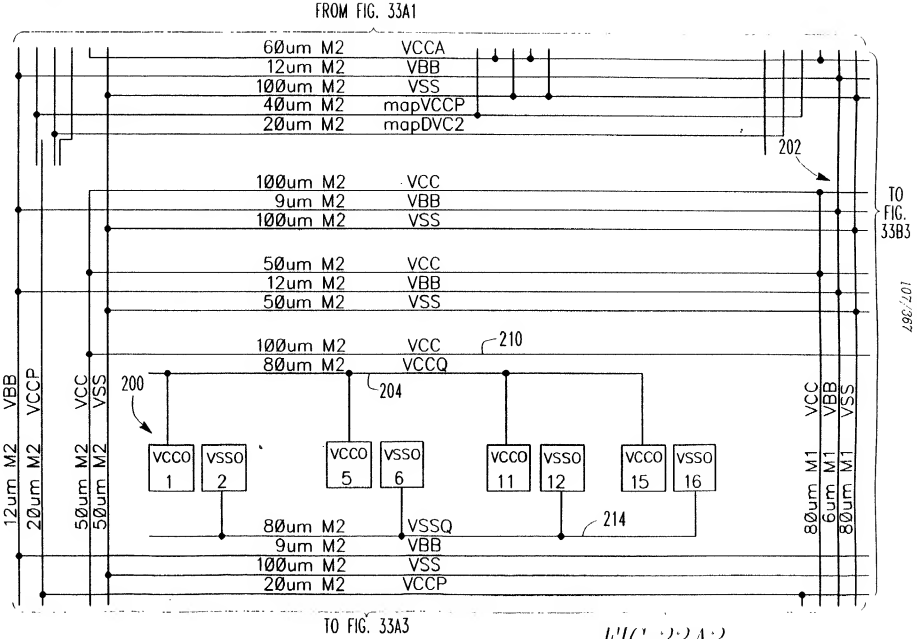
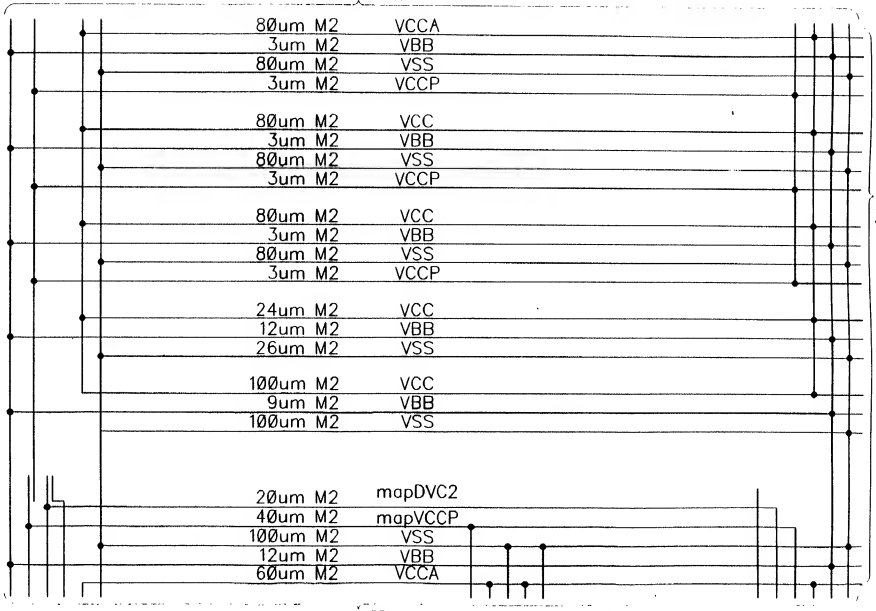

FROM FIG. 33A1
60um M2 VCCA
12um M2 VBB
100um M2 VSS
40um M2 mapVCCP
20um M2 mapDVC2
202
100um M2 VCC
9um M2 VBB
100um M2 VSS
TO FIG. 33B3
50um M2 VCC
12um M2 VBB
50um M2 VSS
100um M2 VCC
80um M2 VCCQ
210
200
204
VCCO 1
VSSO 2
VCCO 5
VSSO 6
VCCO 11
VSSO 12
VCCO 15
VSSO 16
80um M2 VSSQ
214
9um M2 VBB
100um M2 VSS
20um M2 VCCP
12um M2 VBB
20um M2 VCCP
50um M2 VCC
50um M2 VSS
80um M1 VCC
6um M1 VBB
80um M1 VSS
TO FIG. 33A3

FIG 33A2

FROM FIG. 33A2



TO FIG. 33B5

TO FIG. 33A4

FIG. 33A3

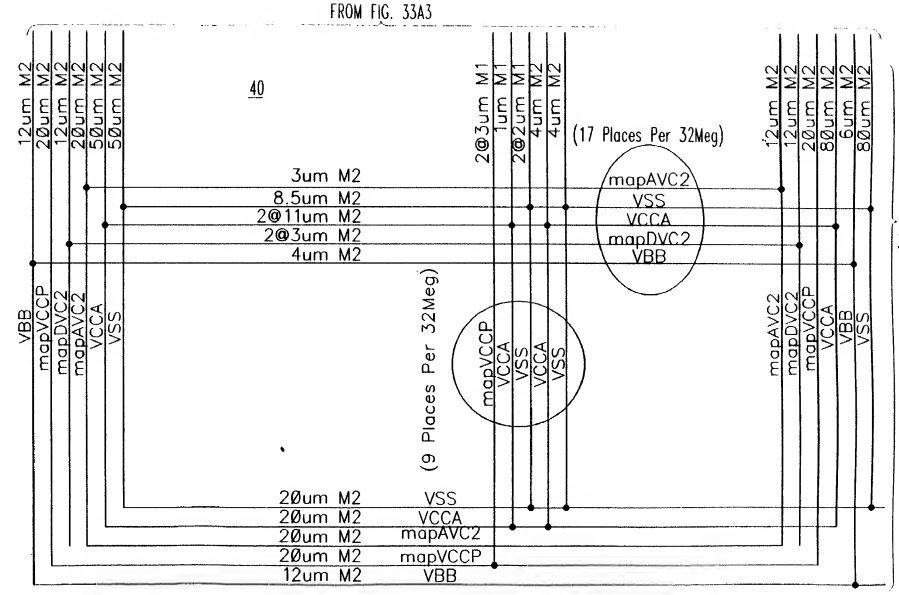

FROM FIG. 33A3
40
12um M2
20um M2
12um M2
20um M2
50um M2
50um M2
2@3um M1
1um M1
2@2um M1
4um M2
4um M2
12um M2
12um M2
20um M2
80um M2
6um M2
80um M2
(17 Places Per 32Meg)
3um M2
8.5um M2
2@11um M2
2@3um M2
4um M2
mapAVC2
VSS
VCCA
mapDVC2
VBB
VBB
mapVCCP
mapDVC2
mapAVC2
VCCA
VSS
(9 Places Per 32Meg)
mapVCCP
VCCA
VSS
VCCA
VSS
mapAVC2
mapDVC2
mapVCCP
VCCA
VBB
VSS
20um M2 VSS
20um M2 VCCA
20um M2 mapAVC2
20um M2 mapVCCP
12um M2 VBB
TO FIG. 33B7
109 367

FIG 33A1

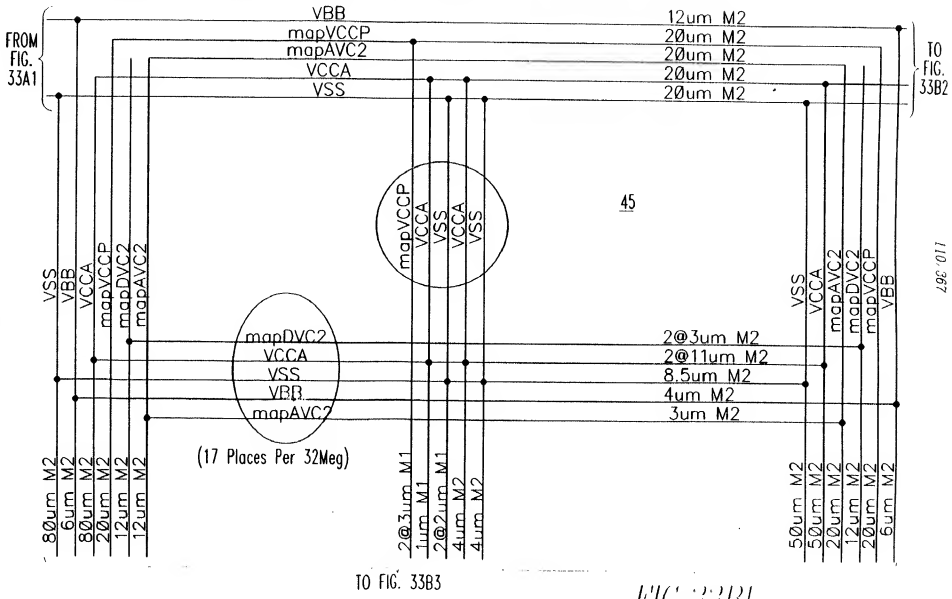


FIG 33B1

110 367

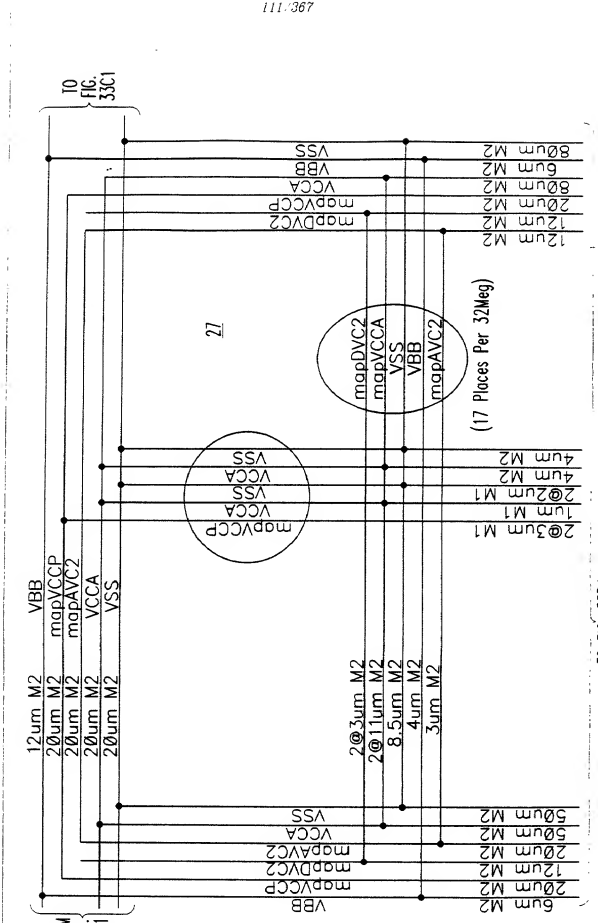

FROM FIG. 33B1
TO FIG. 33C1
TO FIG. 33B4
12um M2
20um M2
20um M2
20um M2
20um M2
VBB
mapVCCP
mapAVC2
VCCA
VSS
2@3um M2
2@11um M2
8.5um M2
4um M2
3um M2
mapVCCP
VCCA
VSS
VCCA
VSS
2@3um M1
1um M1
2@2um M1
4um M2
4um M2
27
mapDVC2
mapVCCA
VSS
VBB
mapAVC2
(17 Places Per 32Meg)
6um M2
20um M2
12um M2
20um M2
50um M2
VBB
mapVCCP
mapDVC2
mapAVC2
VCCA
VSS
12um M2
20um M2
80um M2
mapDVC2
mapVCCP
VCCA
VBB
6um M2
80um M2
VSS

FIG. 33B2

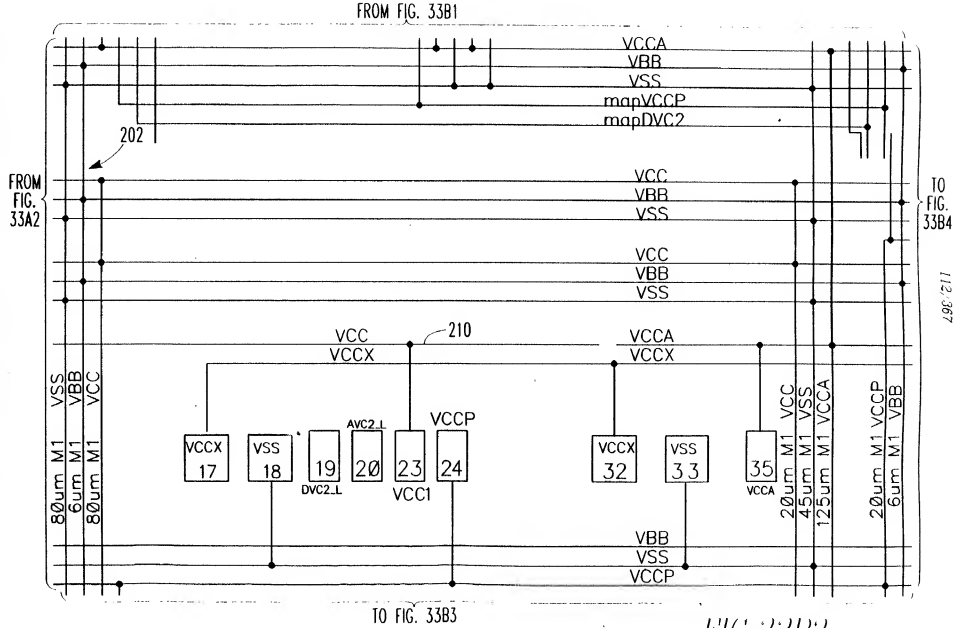


FIG 33B3

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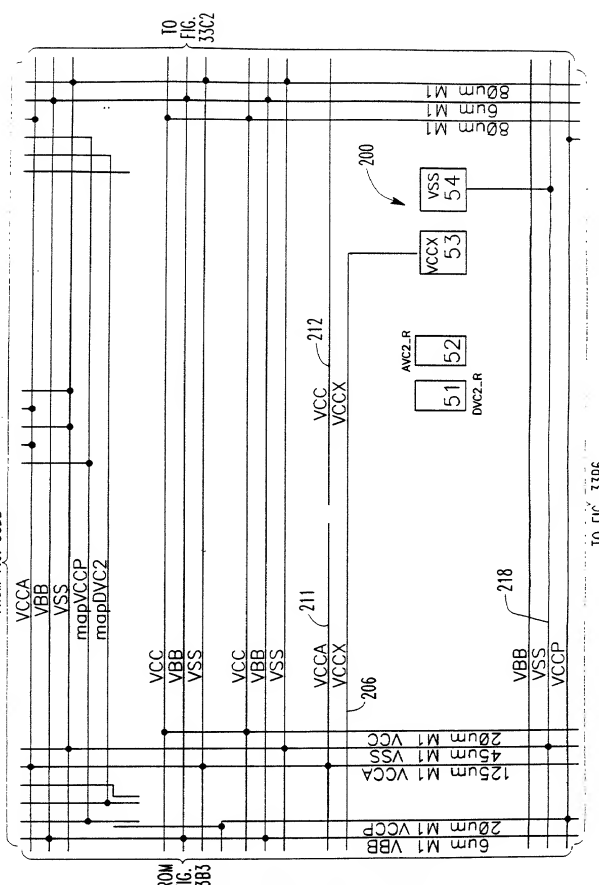
FROM FIG. 33B2
FROM FIG. 33B3
TO FIG. 33C2
TO FIG. 33B6
VCCA
VBB
VSS
mapVCCP
mapDVC2
VCC
VBB
VSS
VCCA
VCCX
206
211
212
218
200
AVC2_R
DVC2_R
51
52
VCCX
53
VSS
54
6µm M1 VCCP
20µm M1 VBB
20µm M1 VCC
45µm M1 VSS
125µm M1 VCCA
80µm M1
6µm M1
80µm M1

FIG. 33B1

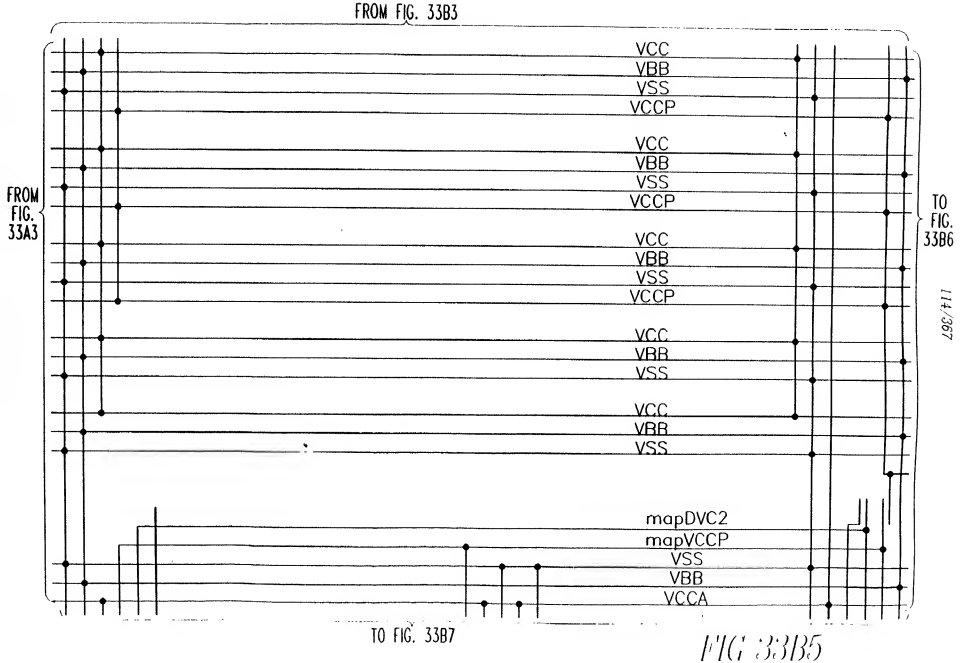

FIG 33B5

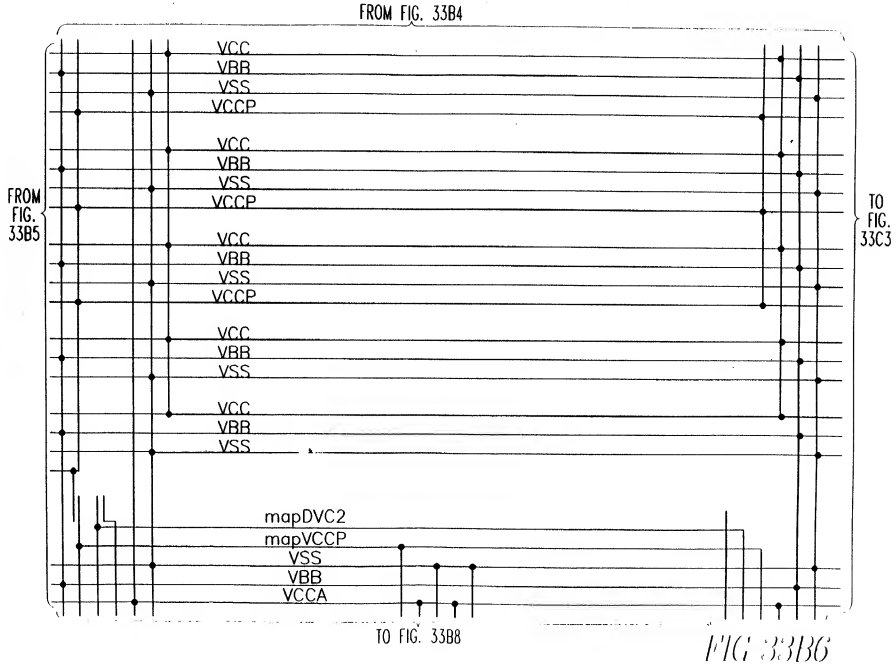
FROM FIG. 33B4
FROM FIG. 33B5
TO FIG. 33C3
TO FIG. 33B8
VCC
VBB
VSS
VCCP
VCC
VBB
VSS
VCCP
VCC
VBB
VSS
VCCP
VCC
VBB
VSS
VCC
VBB
VSS
mapDVC2
mapVCCP
VSS
VBB
VCCA

FIG 33B6

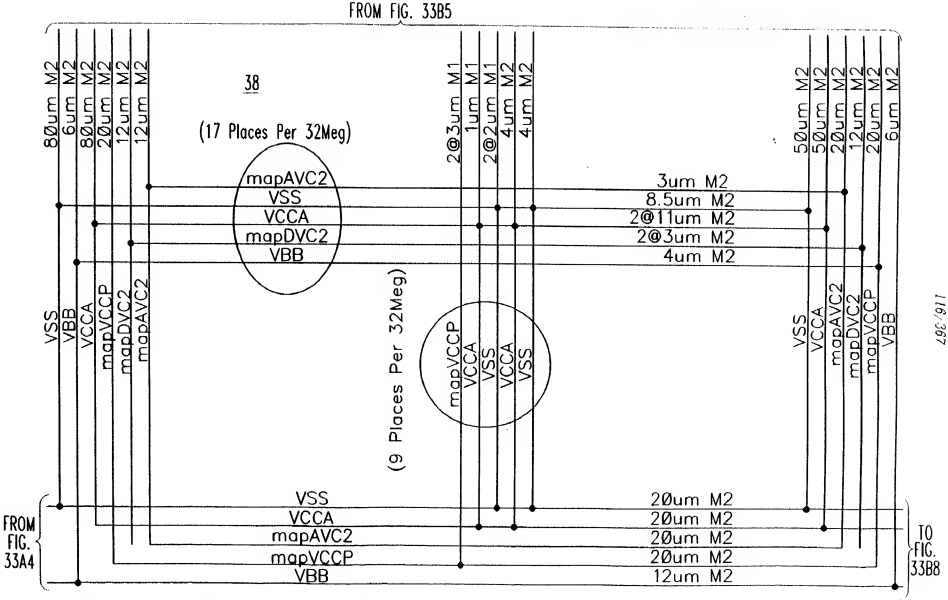

FIG 33B7

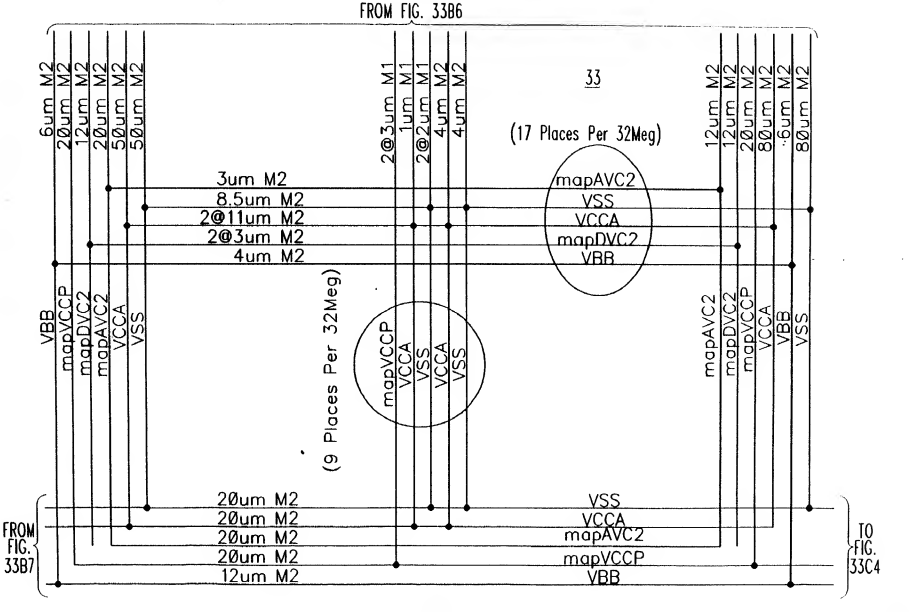

FIG. 33B8

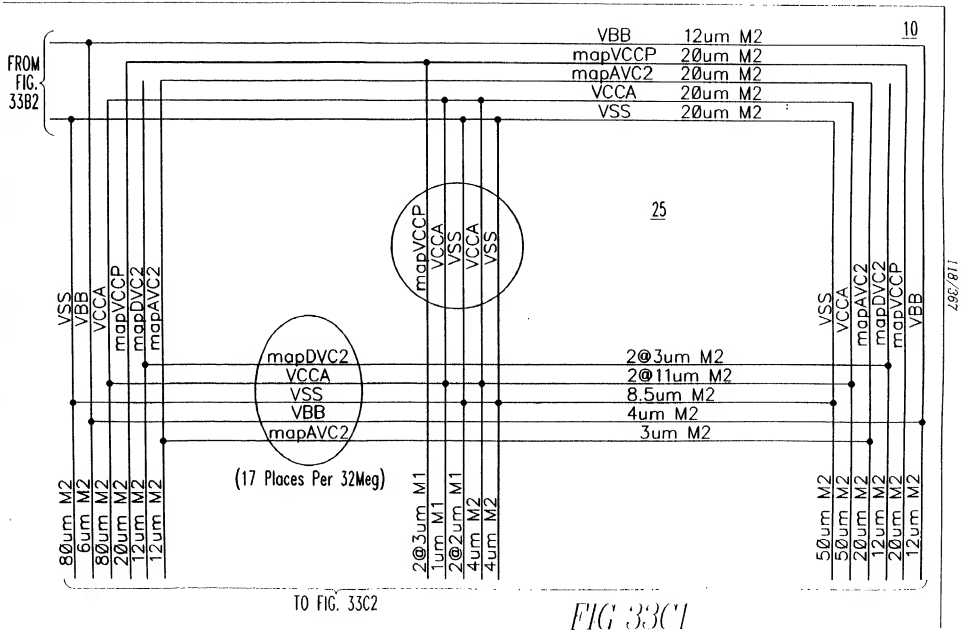

FIG 33C1

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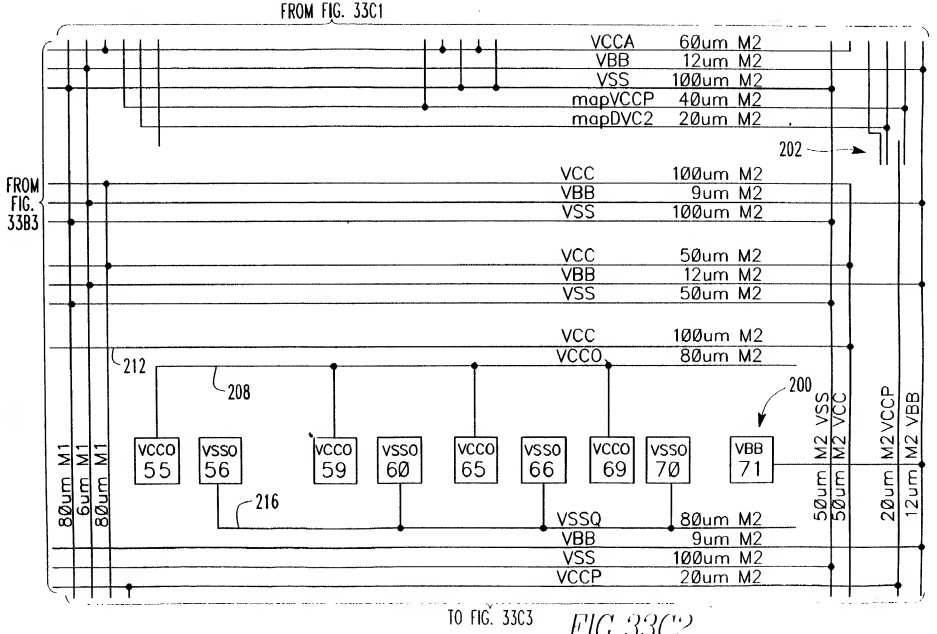

FROM FIG. 33C1
VCCA 60um M2
VBB 12um M2
VSS 100um M2
mapVCCP 40um M2
mapDVC2 20um M2
202
FROM FIG. 33B3
VCC 100um M2
VBB 9um M2
VSS 100um M2
VCC 50um M2
VBB 12um M2
VSS 50um M2
VCC 100um M2
VCCO 80um M2
212
208
200
VCCO 55
VSSO 56
VCCO 59
VSSO 60
VCCO 65
VSSO 66
VCCO 69
VSSO 70
VBB 71
216
VSSQ 80um M2
VBB 9um M2
VSS 100um M2
VCCP 20um M2
80um M1
6um M1
80um M1
50um M2 VSS
50um M2 VCC
20um M2 VCCP
12um M2 VBB
TO FIG. 33C3

FIG. 33C2

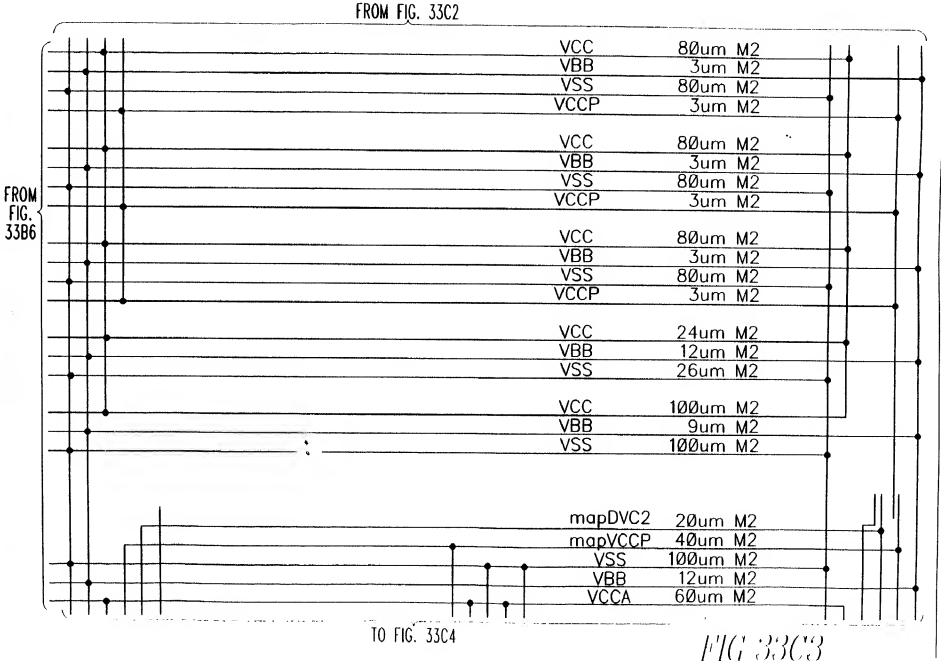

FROM FIG. 33C2
FROM FIG. 33B6
VCC 80um M2
VBB 3um M2
VSS 80um M2
VCCP 3um M2
VCC 80um M2
VBB 3um M2
VSS 80um M2
VCCP 3um M2
VCC 80um M2
VBB 3um M2
VSS 80um M2
VCCP 3um M2
VCC 24um M2
VBB 12um M2
VSS 26um M2
VCC 100um M2
VBB 9um M2
VSS 100um M2
mapDVC2 20um M2
mapVCCP 40um M2
VSS 100um M2
VBB 12um M2
VCCA 60um M2
TO FIG. 33C4

FIG 33C3

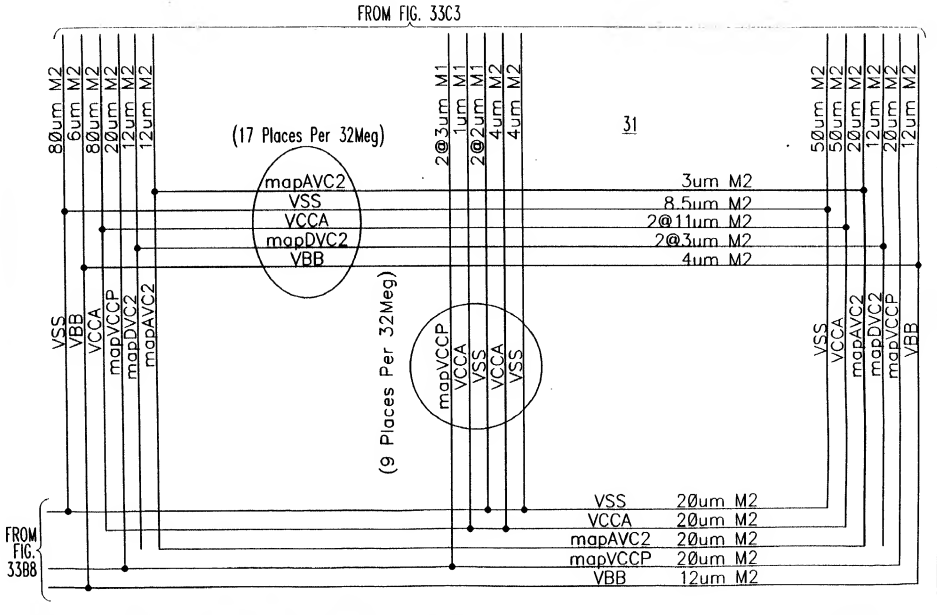

FROM FIG. 33C3
80um M2
6um M2
80um M2
20um M2
12um M2
12um M2
(17 Places Per 32Meg)
mapAVC2
VSS
VCCA
mapDVC2
VBB
2@3um M1
1um M1
2@2um M1
4um M2
4um M2
31
50um M2
50um M2
20um M2
12um M2
20um M2
12um M2
3um M2
8.5um M2
2@11um M2
2@3um M2
4um M2
VSS
VBB
VCCA
mapVCCP
mapDVC2
mapAVC2
(9 Places Per 32Meg)
mapVCCP
VCCA
VSS
VCCA
VSS
VSS
VCCA
mapAVC2
mapDVC2
mapVCCP
VBB
FROM FIG. 33B8
VSS 20um M2
VCCA 20um M2
mapAVC2 20um M2
mapVCCP 20um M2
VBB 12um M2
121,367

FIG 33C4

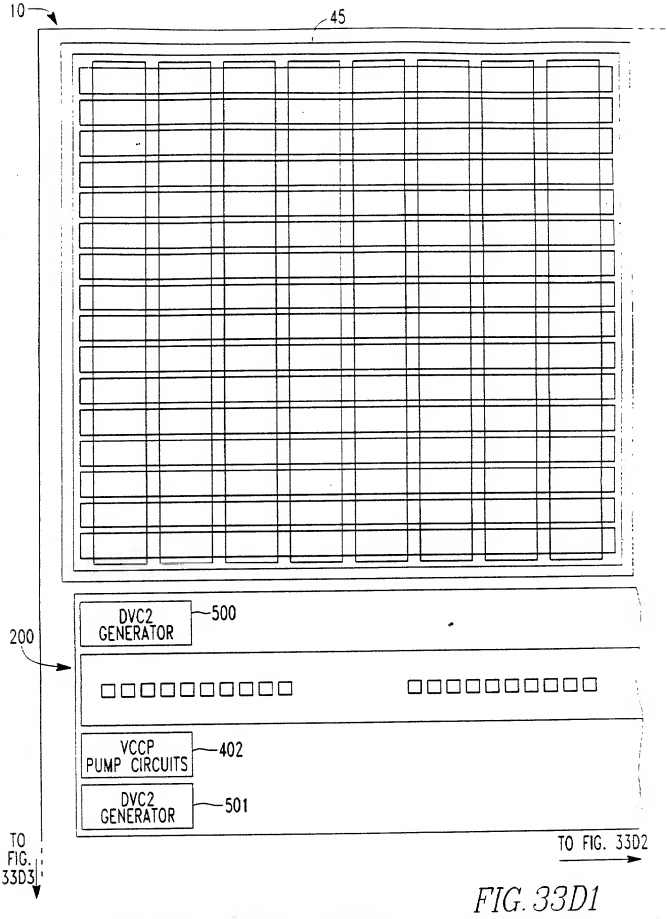

10
45
200
DVC2 GENERATOR
500
VCCP PUMP CIRCUITS
402
DVC2 GENERATOR
501
TO FIG. 33D3
TO FIG. 33D2

FIG. 33D1

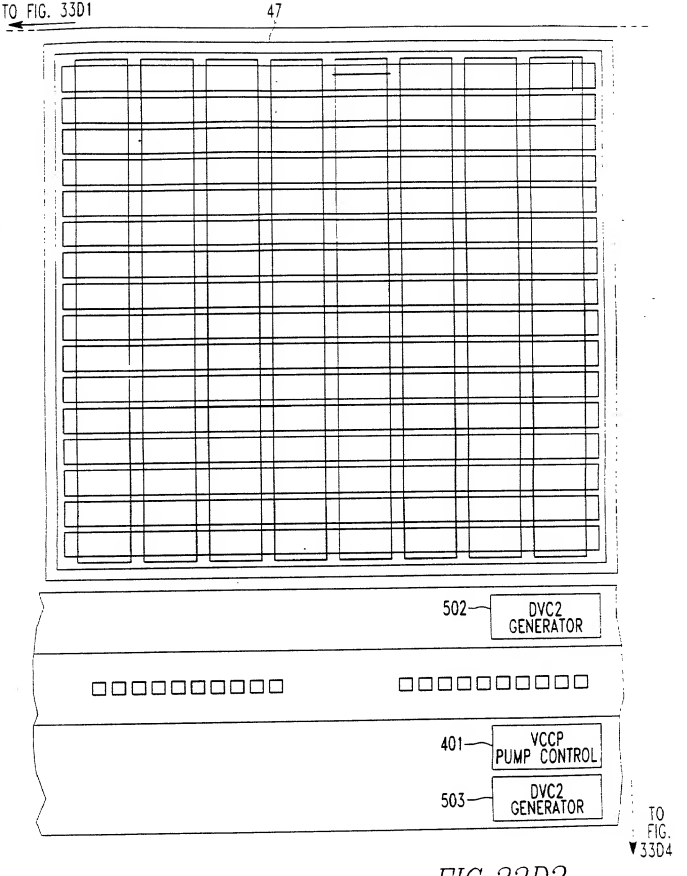

TO FIG. 33D1
47
502
DVC2 GENERATOR
401
VCCP PUMP CONTROL
503
DVC2 GENERATOR
TO FIG. 33D4

FIG. 33D2

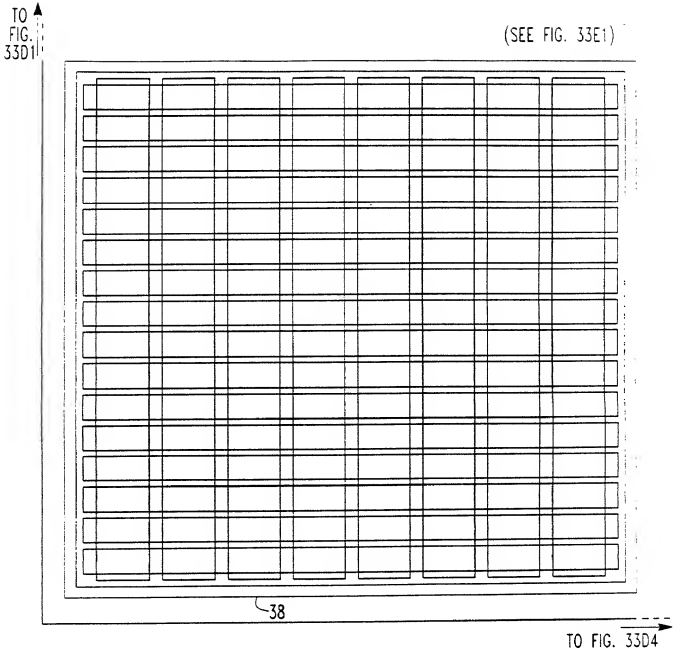


FIG. 33D3

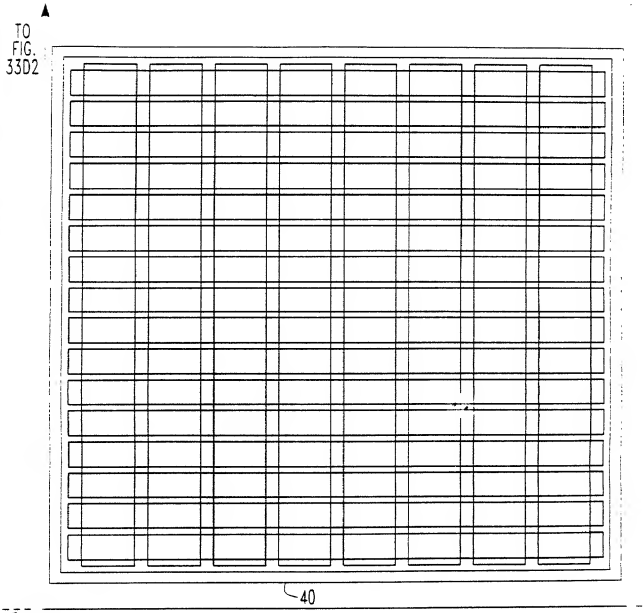


FIG. 33D4

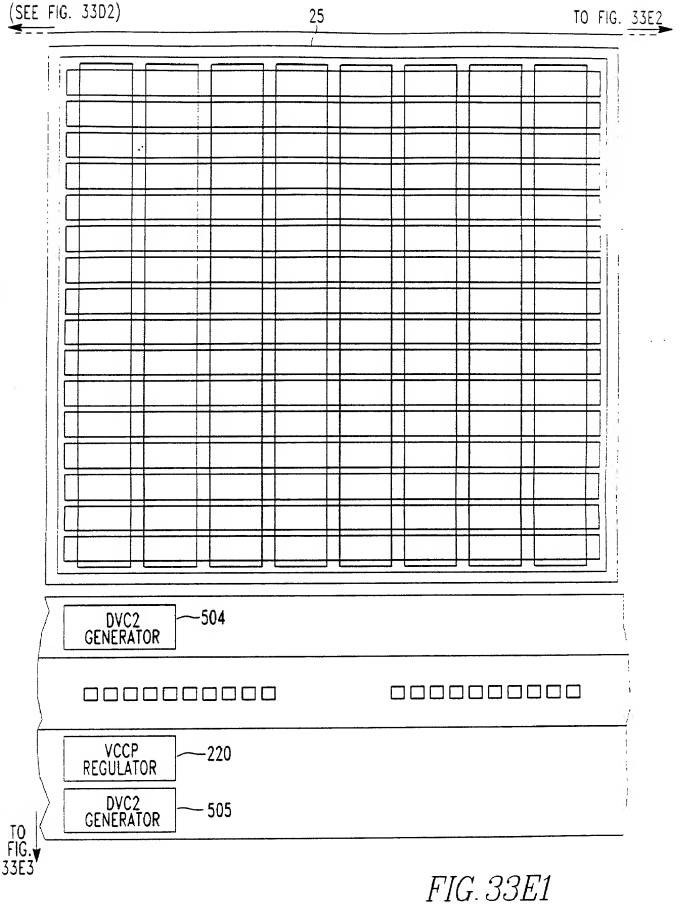

(SEE FIG. 33D2)
25
TO FIG. 33E2
DVC2 GENERATOR
504
VCCP REGULATOR
220
DVC2 GENERATOR
505
TO FIG. 33E3

FIG. 33E1

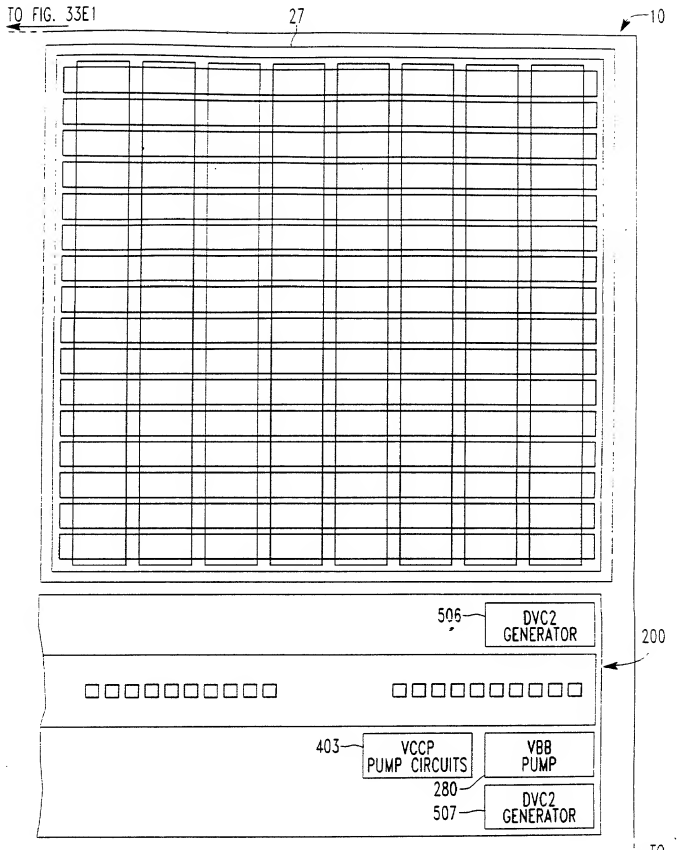

TO FIG. 33E1
27
10
506
DVC2 GENERATOR
200
403
VCCP PUMP CIRCUITS
VBB PUMP
280
507
DVC2 GENERATOR
TO FIG. 33E4

FIG. 33E2

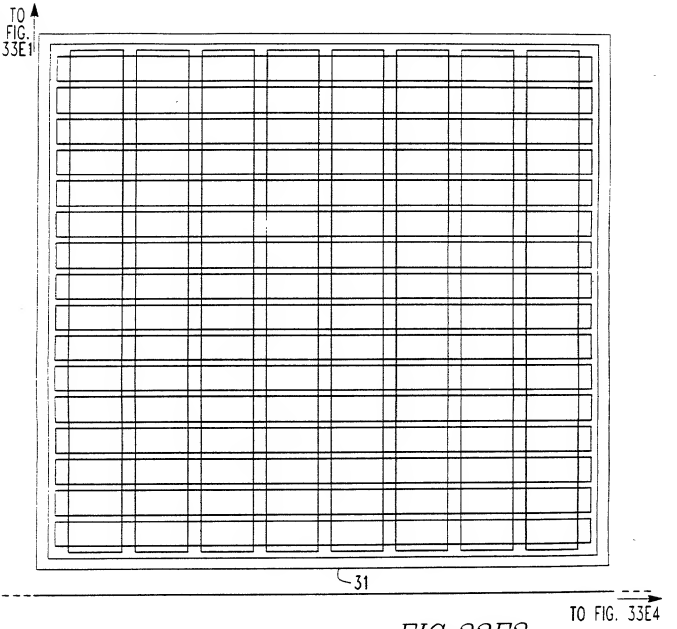


FIG. 33E3

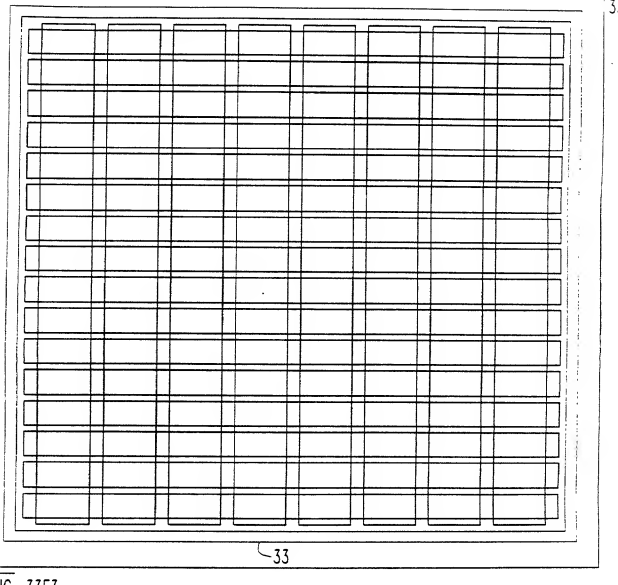


FIG. 33E4

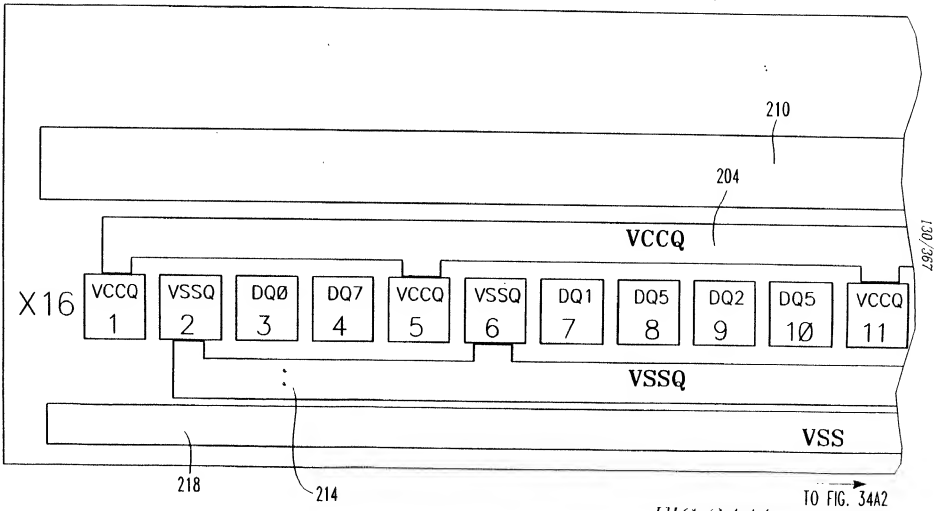
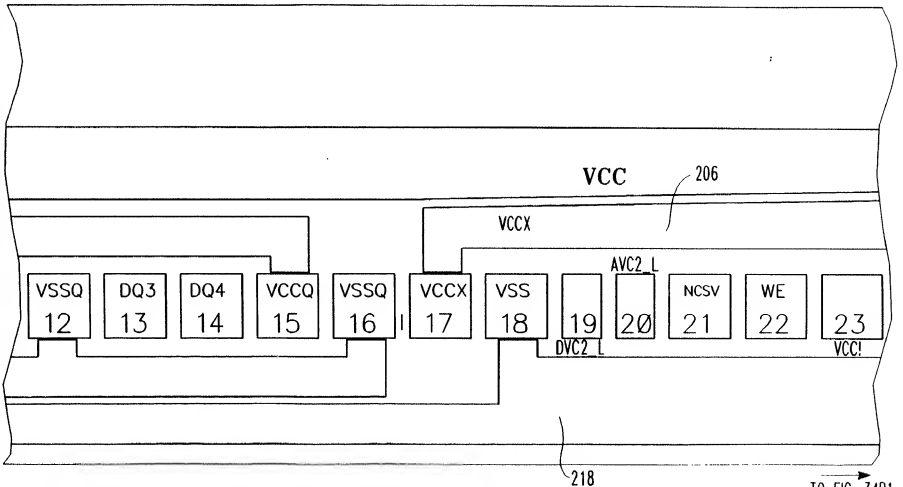

210
204
VCCQ
X16
VCCQ 1
VSSQ 2
DQØ 3
DQ7 4
VCCQ 5
VSSQ 6
DQ1 7
DQ5 8
DQ2 9
DQ5 1Ø
VCCQ 11
VSSQ
VSS
218
214
TO FIG. 34A2
130/367

FIG 34A1

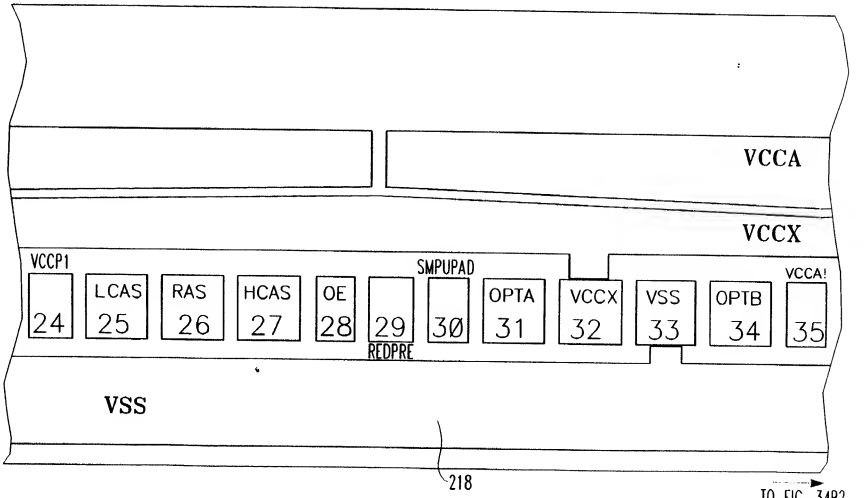
TO FIG. 34A1



TO FIG. 34B1

FIG. 34A2

TO FIG. 34A2



TO FIG. 34B2

FIG. 34B1

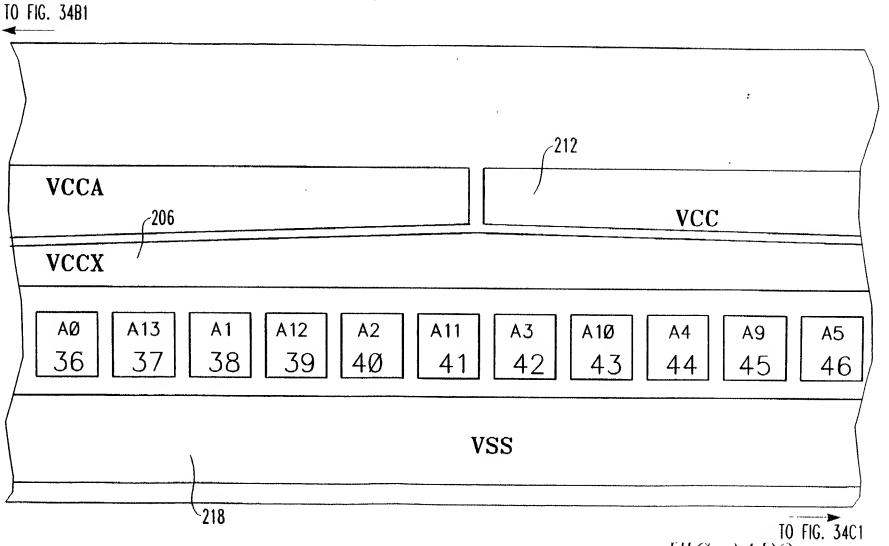


FIG 34B2

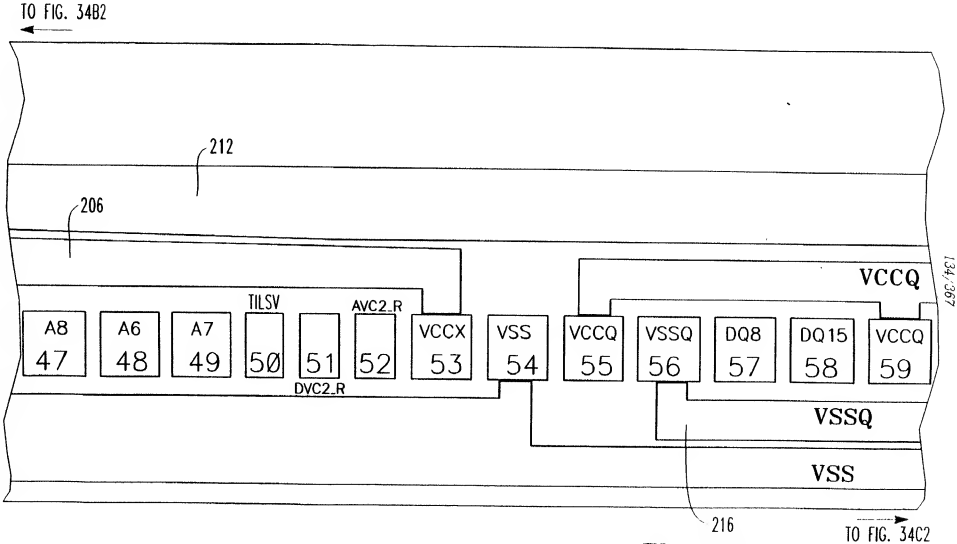
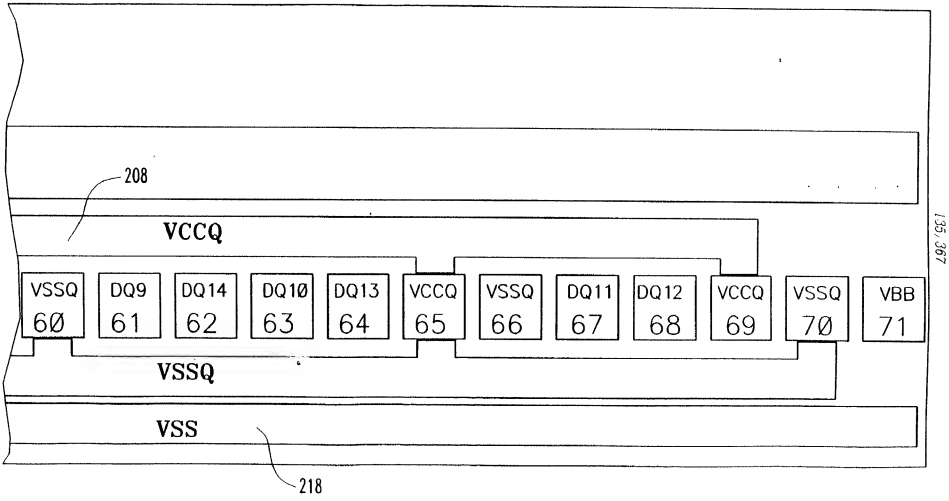

TO FIG. 34B2
212
206
A8
47
A6
48
A7
49
TILSV
50
51
DVC2_R
AVC2_R
52
VCCX
53
VSS
54
VCCQ
55
VSSQ
56
DQ8
57
DQ15
58
VCCQ
59
VCCQ
VSSQ
VSS
216
TO FIG. 34C2
134/367

FIG. 34C1

TO FIG. 34C1



135,967

FIG. 34C2

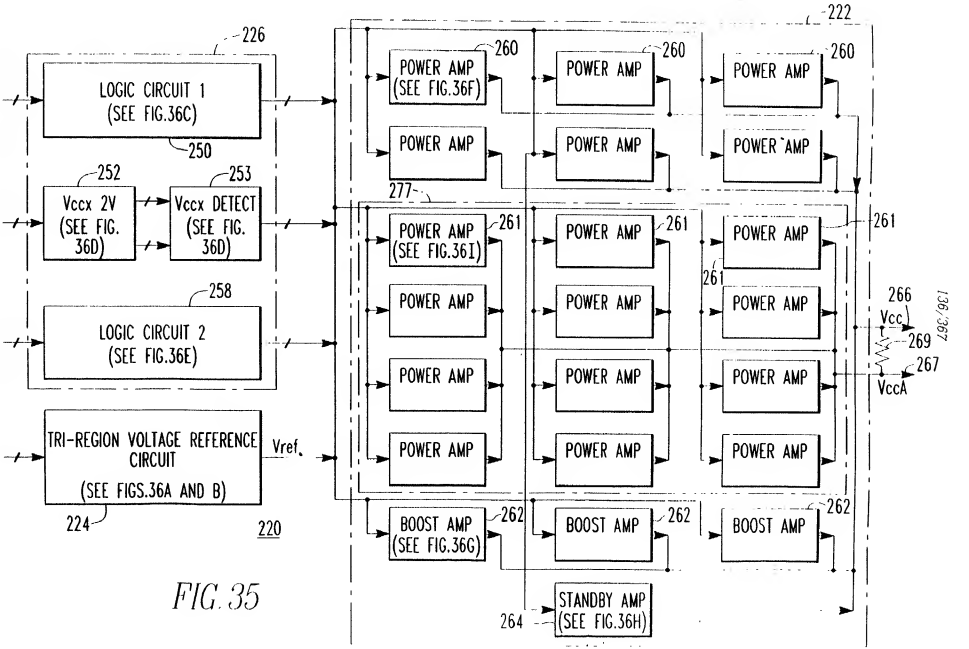

222
226
LOGIC CIRCUIT 1
(SEE FIG.36C)
250
252
Vccx 2V
(SEE FIG. 36D)
253
Vccx DETECT
(SEE FIG. 36D)
258
LOGIC CIRCUIT 2
(SEE FIG.36E)
TRI-REGION VOLTAGE REFERENCE CIRCUIT
(SEE FIGS.36A AND B)
Vref.
224
220
POWER AMP
(SEE FIG.36F)
260
POWER AMP
277
POWER AMP
(SEE FIG.36I)
261
BOOST AMP
(SEE FIG.36G)
262
STANDBY AMP
(SEE FIG.36H)
264
266
Vcc
269
267
VccA
136/367

FIG. 35

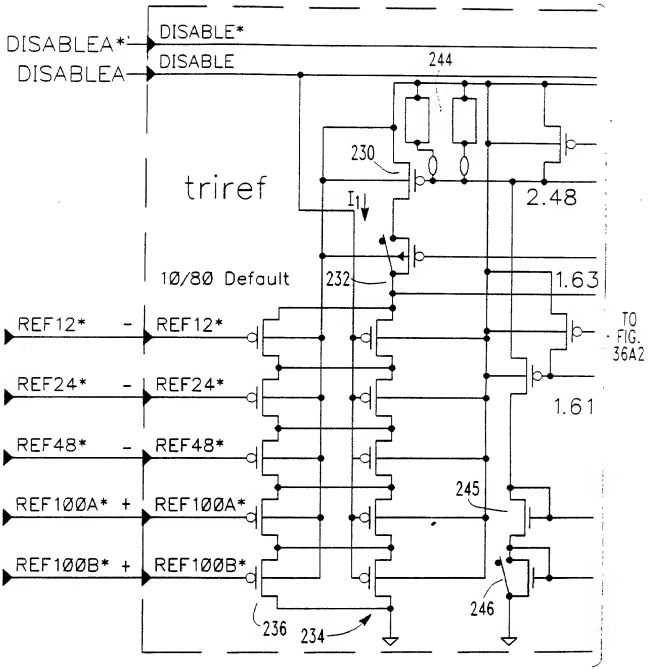

DISABLEA*
DISABLEA
DISABLE*
DISABLE
244
230
triref
I1
2.48
10/80 Default
232
1.63
REF12* - REF12*
REF24* - REF24*
REF48* - REF48*
REF100A* + REF100A*
REF100B* + REF100B*
TO FIG. 36A2
1.61
245
246
236
234

FIG. 36A1

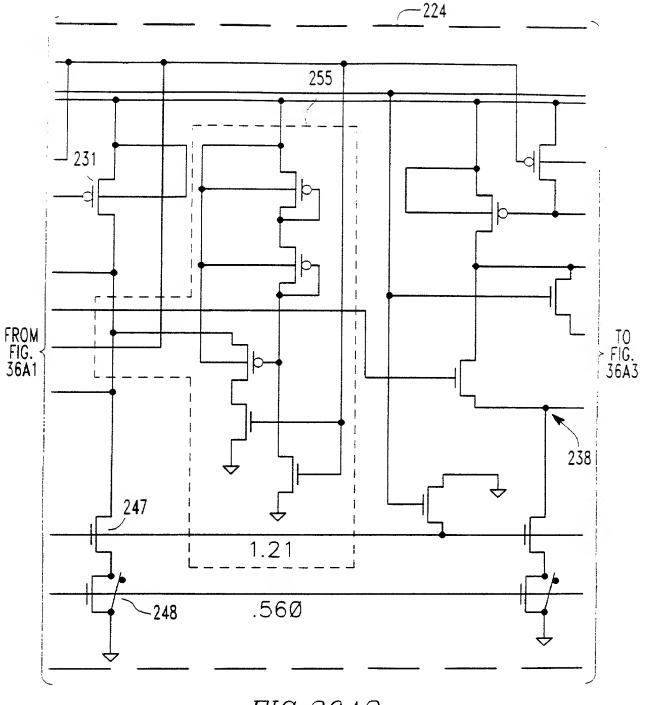


FIG. 36A2

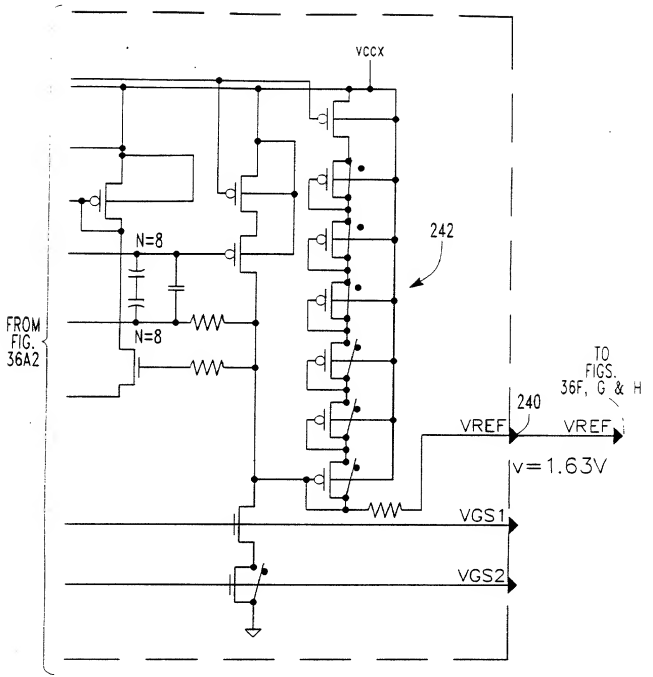

VCCX
242
N=8
N=8
FROM
FIG.
36A2
TO
FIGS.
36F, G & H
240
VREF
VREF
v=1.63V
VGS1
VGS2

FIG. 36A3

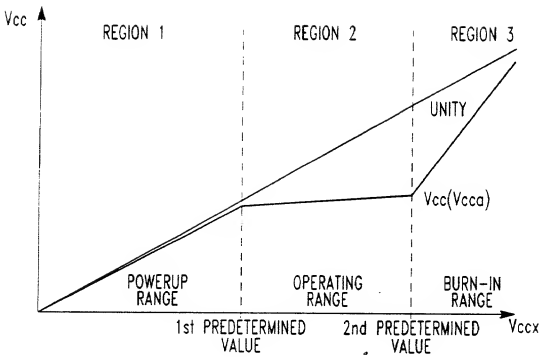

Vcc
REGION 1
REGION 2
REGION 3
UNITY
Vcc(Vcca)
POWERUP RANGE
OPERATING RANGE
BURN-IN RANGE
1st PREDETERMINED VALUE
2nd PREDETERMINED VALUE
Vccx

FIG. 36B

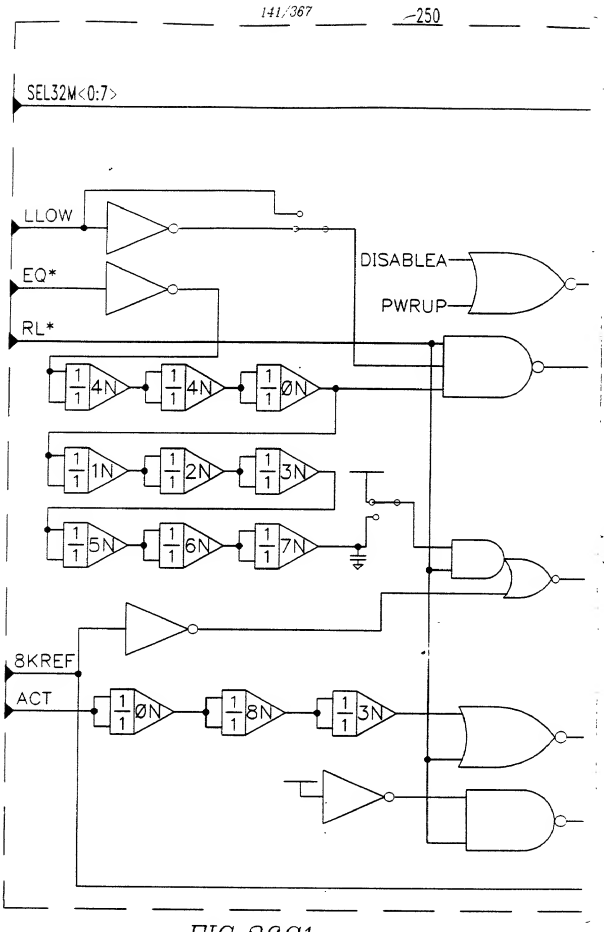

250
SEL32M<0:7>
LLOW
EQ*
RL*
DISABLEA
PWRUP
1/1 4N
1/1 4N
1/1 ØN
1/1 1N
1/1 2N
1/1 3N
1/1 5N
1/1 6N
1/1 7N
TO FIG. 36C2
8KREF
ACT
1/1 ØN
1/1 8N
1/1 3N

FIG. 36C1

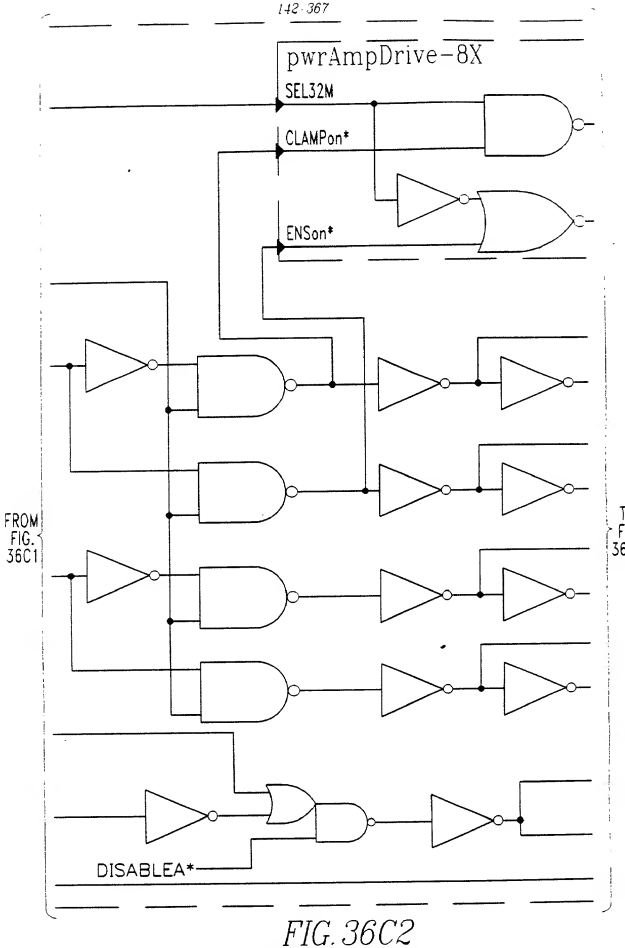

142-367
pwrAmpDrive-8X
SEL32M
CLAMPon*
ENSon*
FROM FIG. 36C1
TO FIG. 36C3
DISABLEA*

FIG. 36C2

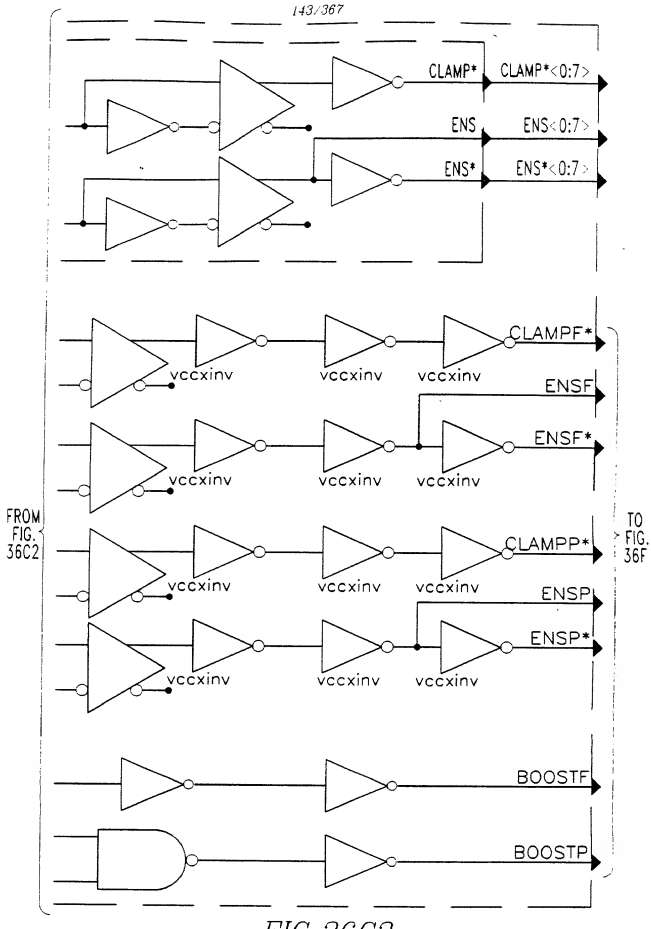

CLAMP*
CLAMP*<0:7>
ENS
ENS<0:7>
ENS*
ENS*<0:7>
vccxinv
CLAMPF*
ENSF
ENSF*
FROM FIG. 36C2
TO FIG. 36F
CLAMPP*
ENSP
ENSP*
BOOSTF
BOOSTP

FIG. 36C3

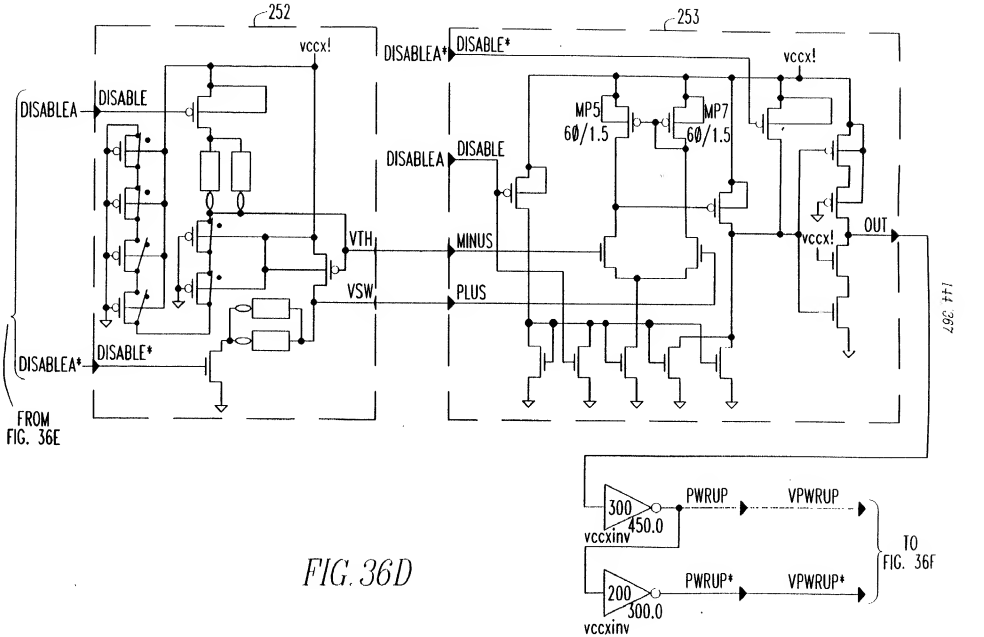

252
253
vccx!
DISABLEA
DISABLE
DISABLEA*
DISABLE*
VTH
VSW
MINUS
PLUS
MP5
6Ø/1.5
MP7
6Ø/1.5
OUT
FROM
FIG. 36E
300
450.0
vccxinv
PWRUP
VPWRUP
200
300.0
PWRUP*
VPWRUP*
TO
FIG. 36F
144 367

FIG. 36D

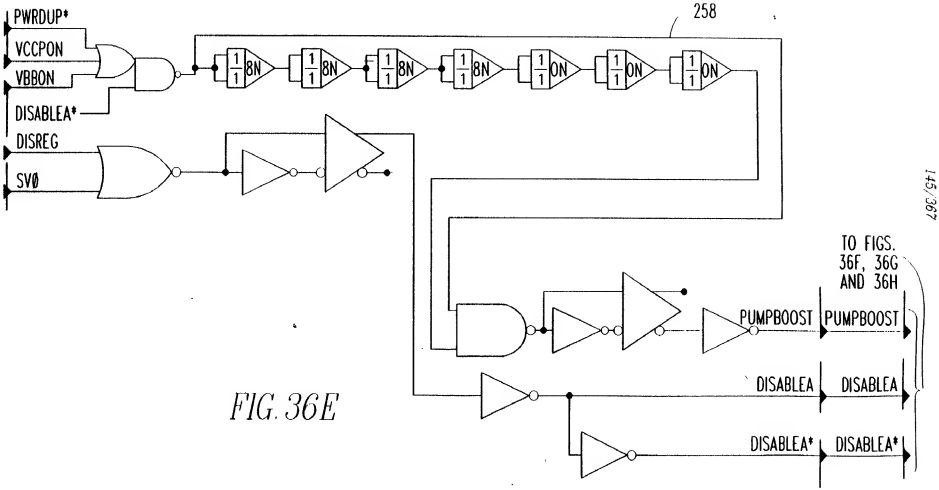

PWRDUP*
VCCPON
VBBON
DISABLEA*
DISREG
SVØ
258
8N
8N
8N
8N
0N
0N
0N
TO FIGS. 36F, 36G AND 36H
PUMPBOOST
PUMPBOOST
DISABLEA
DISABLEA
DISABLEA*
DISABLEA*

FIG. 36E

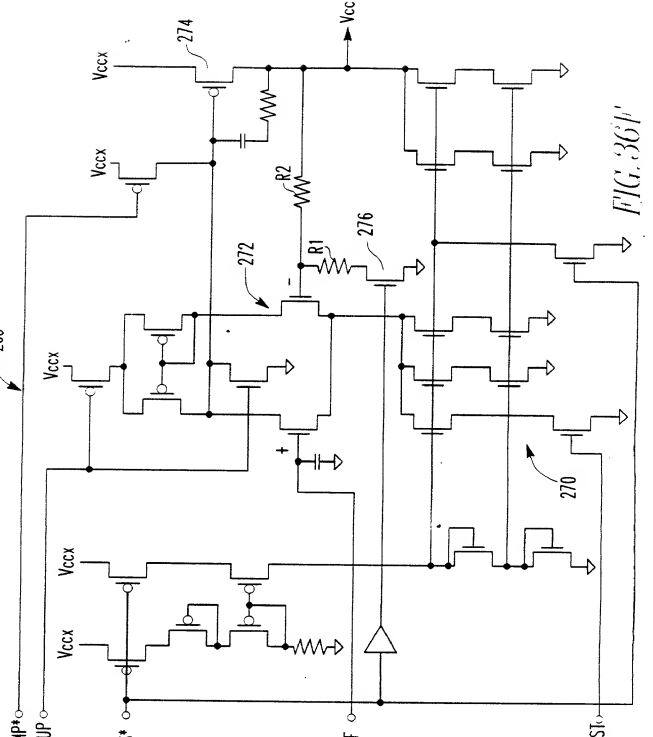

CLAMP*
VPWRUP
ENS*
VREF
PUMP BOOST
260
270
272
274
276
Vccx
Vcc
R1
R2

FIG. 36H

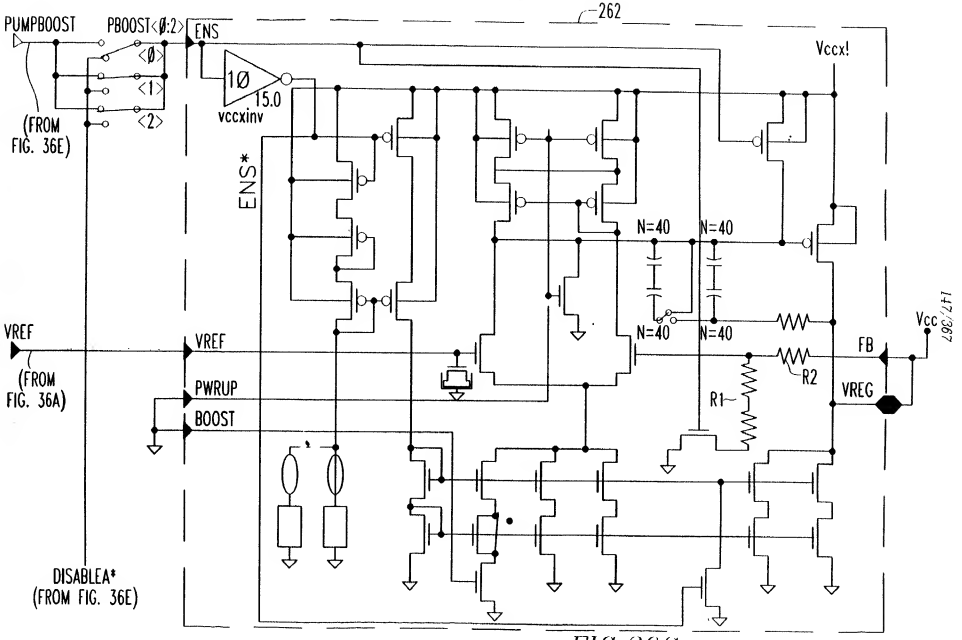

262
PUMPBOOST
PBOOST<Ø:2>
<Ø>
<1>
<2>
(FROM FIG. 36E)
ENS
1Ø
15.0
vccxinv
ENS*
Vccx!
N=40
N=40
N=40
N=40
VREF
(FROM FIG. 36A)
VREF
PWRUP
BOOST
FB
R2
R1
VREG
Vcc
DISABLEA*
(FROM FIG. 36E)

FIG. 36G

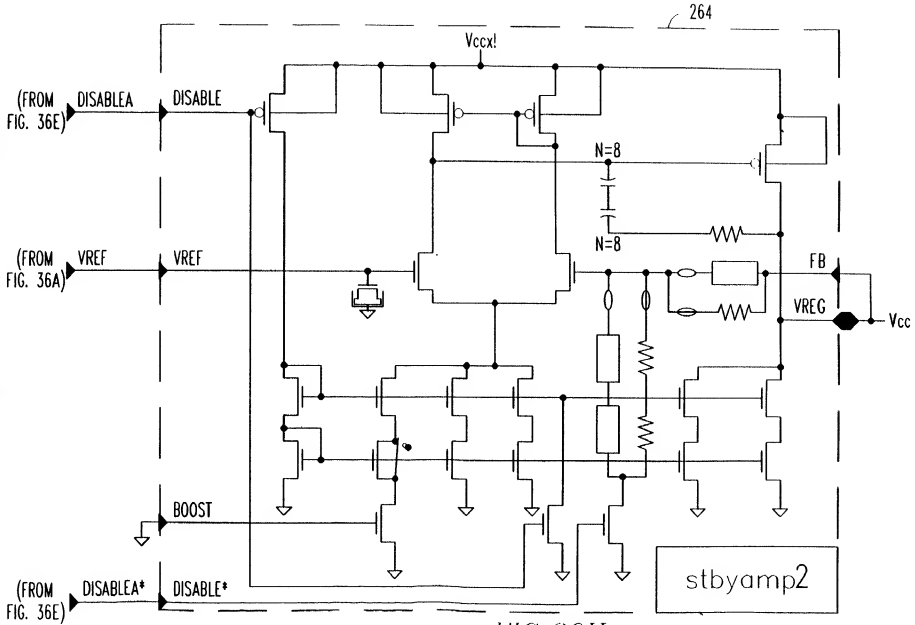

264
Vccx!
(FROM FIG. 36E)
DISABLEA
DISABLE
N=8
N=8
(FROM FIG. 36A)
VREF
VREF
FB
VREG
Vcc
BOOST
(FROM FIG. 36E)
DISABLEA*
DISABLE*
stbyamp2

FIG. 36H

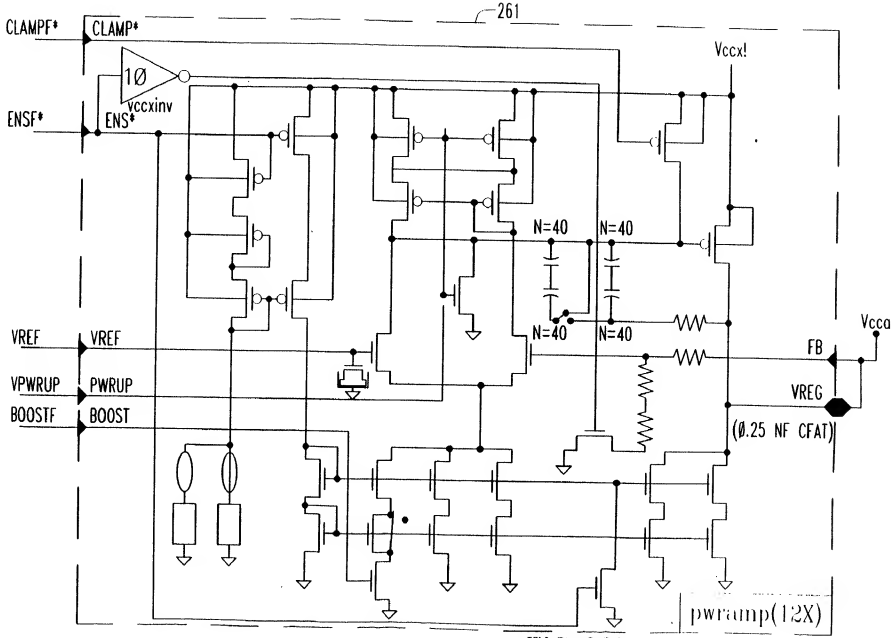


FIG. 361

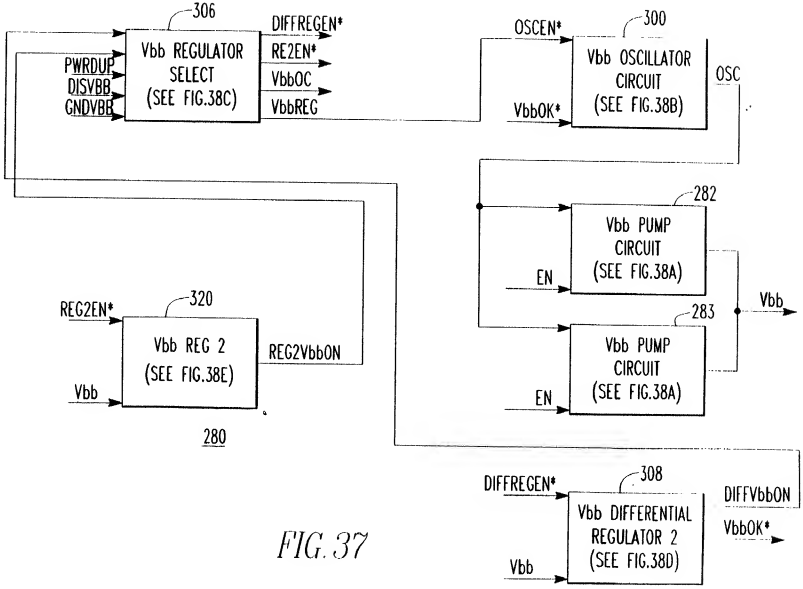


FIG. 37

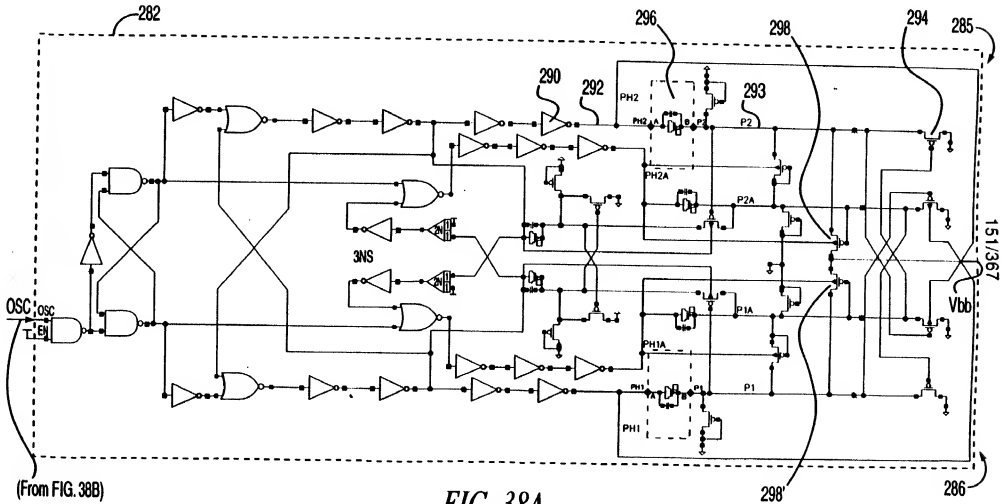

282
296
298
294
285
290
292
293
PH2
P2
PH2A
P2A
3NS
OSC
P1A
PH1A
P1
PH1
Vbb
151/367
(From FIG. 38B)
298'
286

FIG. 38A